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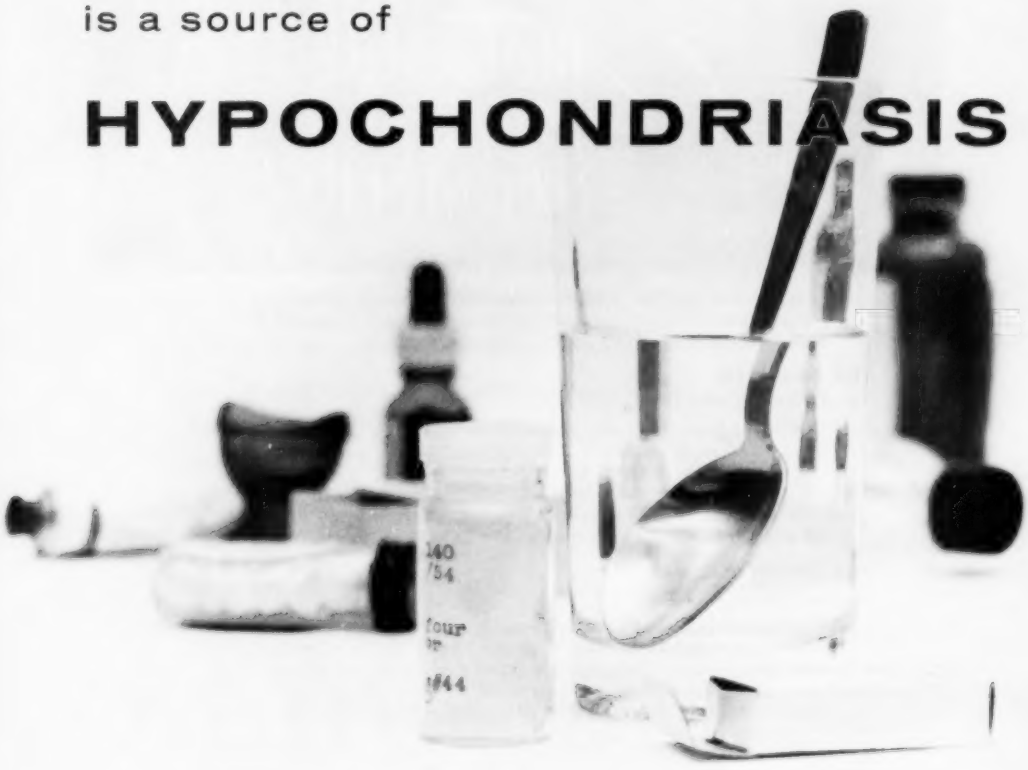

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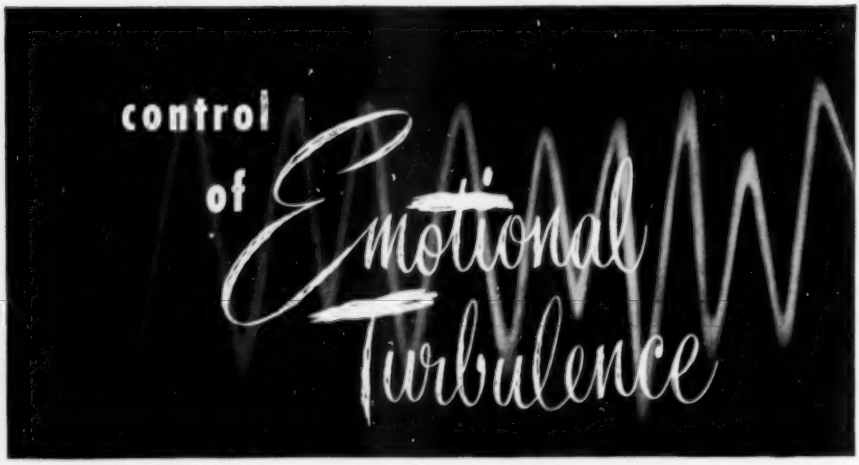

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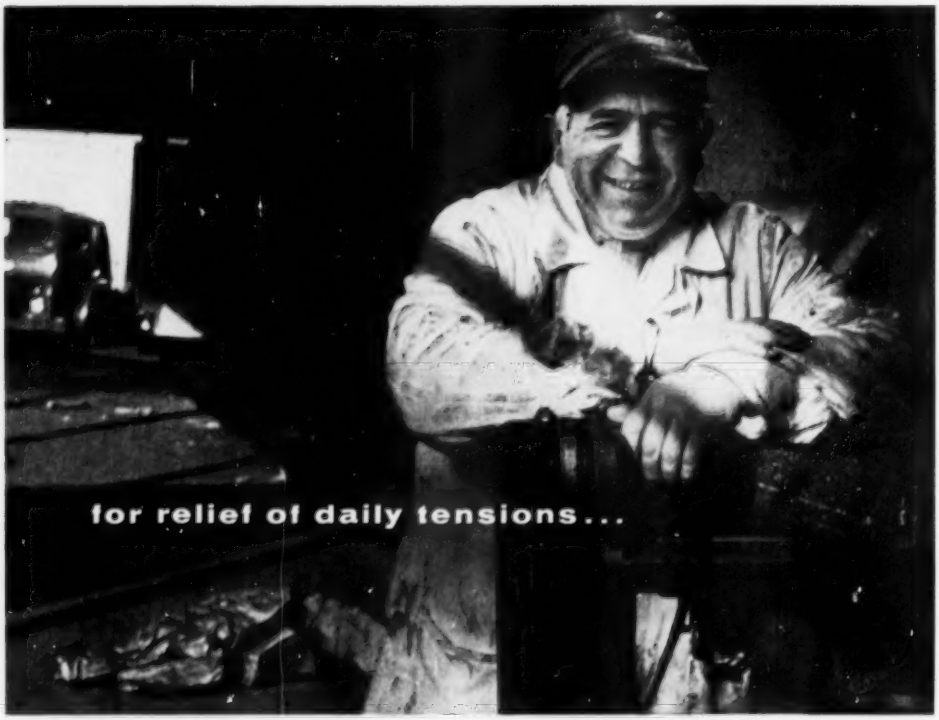

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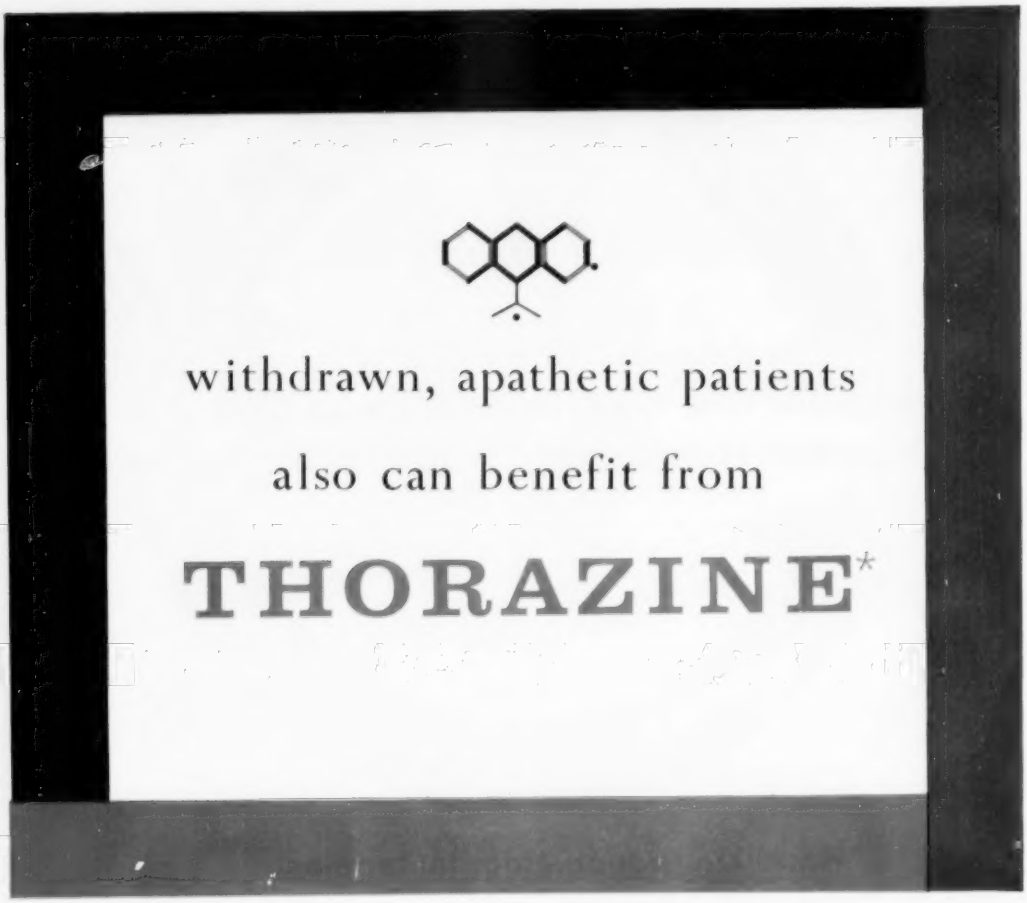

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1. Rockmore, L.; Shatin, L., and Funk, I.C.: Psychiat. Quart. *30*:189 (April) 1956.

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EVOLUTION OF COMMUNITY MENTAL HEALTH CONCEPTS [1]

ROBERT H. FELIX, M.D., BETHESDA, MD.[2]

To trace the lifeline of community mental health concepts is to reveal man's plasticity to ideas and change. In time and place, society's concern has varied widely, running the gamut of ignorance to insight, ritual to research, and medicine man to medical specialist. Man's progress in devising methods to deal with psychological disorders cannot be charted in a straight line of ascent. Like human experience itself, the mental health movement has been frequently stopped in its tracks, forced to draw back before sufficient ground has been covered to allow for net forward movement.

This is probably the pattern that most of us who wrestle with the problems of mental ill-health and mental health have regularly encountered. For this reason it seems profitable, to examine from time to time, our past as it influences both our present and future efforts. We, who work so close to the scene, often tend to lose our historical perspective. In many cases a backward glance could give us a truer measure of our accomplishments and relieve us of some of the feeling of frustration and guilt because we have not changed the world in a brief lifetime.

Obviously an organized mental health movement did not suddenly burst full-blown upon the public consciousness. It has taken more than two milleniums, moving gradually from the province of the supernatural to treatment, then on to prevention, and finally to this mid-century accent on a spirit of total health—an enhancement of the daily lives and satisfactions of all the community's members.

While a hygiene of the mind had been adumbrated in earlier periods, the beginning of the twentieth century furnished the cultural climate in which an organized mental health movement could flourish. Swift industrialization and a rapid population expansion had produced a major social reordering. To society as a whole, the early 1900's introduced more political and social involvement, the growth of big business and big labor, and an expansion in communication and individual interests beyond the boundaries of the local community and the country. It was the dawn of new social welfare legislation, child labor laws, mental testing programs, suburbia, progressive education, the feminist movement, and a realignment of family life.

It was a period of major medical advance marking the beginning of an interdisciplinary approach to normal and maladaptive behavior. Dynamic psychiatry, physiology and sociology had provided many of the new tools. History was being reinterpreted in the light of new knowledge of mind and emotions—eugenic theory, the spirochete in the etiology of general paresis, neuron theory, Freud's psychoanalysis, Meyerian psychology, a new discipline of psychiatric social work, and discoveries in bacteriology and chemistry leading to the control of typhoid fever, tuberculosis, and diphtheria.

Dissatisfaction with old orders and demands for remedial changes were the order of the day in 1908 when Clifford Beers, who had been mentally ill himself, published his candid and deeply sensitive account of the abusive treatment and sordid conditions that prevailed in this country's mental hospitals. Mr. Beers' book, *A Mind That Found Itself*, was the opening salvo in setting off a mental-health chain reaction that has resounded around the world. Alert to the significance of the book and anticipating the entrance of a social viewpoint in psychiatry, both Professor William James and Dr. Adolf Meyer lent their strong support and encouragement to Beers' plan for a network of community mental hygiene associations "as an effective means of promoting and conserving mental health and ameliorating the

[1] Read in the symposium, Community Organization for Mental Health, at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

[2] Director, National Institute of Mental Health, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare, Bethesda 14, Md.

scourge of mental ill-health." Beers' inspired undertaking led to the establishment in 1909 of the National Committee for Mental Hygiene, the forerunner of today's National Association for Mental Health.

In the first few years after Beers succeeded in synthesizing the movement, public concern was largely directed to improving mental hospital conditions. World War I interrupted much of the still limited activity, but it taught the health professions and the public a great deal that they had formerly only suspected about mental illness and the potential value of mental hygiene. From the war experience it was apparent that dealing with those already ill was not enough. There was a necessity for preventive techniques, and the mental health movement shaped up with a new emphasis.

Interest first centered on provisions for maladjusted children. It was immediately clear that the mental hospital was not an appropriate setting for treating children. The child's total environment—his home, his school, all of the community agencies—had to be taken into account. This was accomplished. The concern of courts, schools, welfare agencies, and other elements of community life led naturally from exclusive interest in mentally ill children to the concept of child-guidance clinics.

The most significant outcome of pioneering in child guidance was the stimulus it gave to mental health research. The genesis of mental illness now began to be sought in earnest, and the search led to the child's whole constellation of relationships. The identification of physical and emotional factors that contributed to disturbance in the individual child was followed by the identification of community factors that contributed to the child's personal problems. The next step was inevitable—a recognition of the needs for mental health services not for the child alone, but perhaps more urgently for his parents, his siblings, and all others responsible for or influencing his healthy growth and development.

The contribution of the pioneers who led in the establishment of the child-guidance and adult clinics was not confined to additional health services for children and their parents. As much as anything, it pointed up the need of a new attack based upon a balanced and integrated program of services and research. This was the situation with the onset of World War II. The pendulum had swung in 40 years from concentration on improved mental hospitals to outpatient and preventive programs. Concomitant with this swing was a temporary slackening of concentration on improving treatment and rehabilitation techniques. This is the stage of development when community mental health programs became a joint federal, state, and community enterprise, a necessity dramatically revealed by World War II.

MENTAL HEALTH IN THE PUBLIC HEALTH SERVICE

In many ways, the history of the mental health program of the Public Health Service recapitulates that of the public mental hygiene movement. In each, the line of development has moved from almost a total emphasis on the hospitalized mentally ill to include outpatient services and prevention. Authority to deal with mental health as a separate medical problem was first given to the Public Health Service in 1929. At that time, the Narcotics Division was set up with Dr. Walter L. Treadway as its Chief. While the actual emphasis of this Division was on one specific illness—narcotic addiction—Dr. Treadway extended its function to broader considerations—the need for more research, wider application of mental health services, and special attention to the mental health aspects of alcoholism and delinquency. In 1930, the Narcotics Division was given increased authority to cooperate with state and local mental health officials, and the name was changed to Mental Hygiene Division. Dr. Treadway remained as the Division's Chief until 1938 when he was succeeded by Dr. Lawrence Kolb.

Most of us know of Dr. Kolb's classical contribution to studies of narcotic addiction. Of equal importance are the vigorous efforts he made in laying the foundation for an expanded federal program in the treatment and prevention of mental disorders. Dr. Kolb decried the lack of research and urged the creation of a national neuropsychiatric institute, with both clinical and laboratory facilities for the comprehensive study of nervous

and mental diseases. Such an institute, Dr. Kolb believed, should be able to allocate funds to competent research groups throughout the country. This was the thinking that Congress accepted 7 years later when the National Mental Health Act was passed.

Dr. Kolb's career touched upon that of another great man in American psychiatry, Dr. Samuel W. Hamilton, a foremost authority on mental hospital administration. Dr. Hamilton directed a project of mental hospital inspections sponsored by several medical and lay groups in the United States and Canada, including The American Psychiatric Association. The project was supported by a grant from the Rockefeller Foundation. When the grant expired in 1939, the Public Health Service took over the inspection services with Dr. Hamilton in charge.

Unfortunately, the efforts of these and other workers of the 1930's and early '40's were hindered by lack of research, lack of trained personnel, lack of funds to conduct research and training, and strong resistance from large segments of both the public and the profession to a full-scale, coordinated mental health program. Rehabilitation work was minimal, and community mental health services barely made a dent on the community needs.

Then came World War II. Our military experience revealed the dire state of the Nation's mental health. The times again called for strong public action, and it could have taken any of several directions. It is highly problematical that the National Mental Health Act in its present form and scope would have been passed in 1946 had it not been for the wisdom, foresight, and wholehearted support of Dr. Thomas Parran, who was then Surgeon General of the Public Health Service. Dr. Parran was convinced of the necessity of a broad federal program. When the writer was appointed to succeed Dr. Kolb upon the latter's retirement in 1944, Dr. Parran's charge was to do everything possible to further the development of a balanced and effective national program. This same support has been continued by Dr. Parran's successor, Dr. Leonard Scheele, who, under the terms of the Act, created the National Institute of Mental Health in 1947.

NATIONAL PLANNING

In its broadest terms, the National Mental Health Act provides for a program involving 3 closely integrated functions: (1) research into the causes, diagnosis, prevention, and treatment of mental illness; (2) the training of psychiatric and allied personnel; and (3) assistance to the states in developing their mental health programs. Administration of the program is vested in the National Institute of Mental Health.

In the first few years following the establishment of the Institute, emphasis was necessarily directed to those activities which would stimulate concrete action on basic needs. The needs were then and continue to be—more trained personnel, more research, more state and community services, and better care and treatment of the mentally ill individual both in and out of hospitals. Now, however, there is one major difference. We have the machinery to move forward at an increasing pace to these ends. This last decade has seen a tremendous expansion in both personnel and funds to carry on mental health activities. Also, there has been an intensification in the depth and breadth of the activities that are conducted and supported. Our efforts have expanded to include work on special social and medical problems—the mental health needs of the aged, rehabilitation of the mentally ill, mental retardation, drug addiction, and juvenile delinquency, among others.

COMMUNITY SERVICES

The Institute's community services program is designed to carry out those responsibilities described in the Mental Health Act as "developing and assisting the States in the use of the most effective methods of prevention, diagnosis, and treatment of psychiatric disorders." This phase of the total program, in accordance with our concept of balance, is closely integrated with the other two major phases—research and training. It must necessarily be so as the community services program operates in such widely diverse areas as assistance in the development of staff, education of professional groups, community education, clinic and rehabilitation services, consultation on mental

hospital administration, and other mental health aspects.

Since the initiation of the community services program, we have seen continued progress at both state and federal levels. In 1946, 24 states had mental health programs. Today each of the states has a going program. Much of this progress has come about through a federal-state partnership during the past 10 years. Our part has been to give the states consultation and assistance through staff in Washington, and particularly by the staff in our regional offices. Estimates for 1956 show that the states will expend $25,500,000 for their mental health programs. The total federal funds available to the states in 1956 is $3,000,000. A measure of progress is possible by comparing these figures with those for 1948: State and federal funds in 1948 for outpatient services amounted to $4,657,996, and almost half of this—$2,130,858—came from federal grants-in-aid.

What, in general, are the assistances we give to the states? Our most common requests are for consultation on program development, recruitment and training of personnel, and methods of implementing mental health services such as outpatient clinics for emotionally disturbed and mentally retarded children and adults; improvement of treatment, rehabilitative, and aftercare programs; and general public education.

Our community services staff have worked closely with state and other national agencies in alcoholism control programs. Ten years ago not a single state had a formal program for control of alcoholism. Not there are 33 states with alcoholism programs with total state expenditures amounting to $3,501,687.

In contrast to concern about alcoholism, state activity in narcotic addiction has been minimal. In general, the feeling among the states is that the narcotic addict is a federal responsibility. Little headway has been made in getting the states to assume their share of the burden. Some of the hurdles to overcome are the resistance of the mental hygiene clinics to treat drug addicts, lack of accurate information on the magnitude and nature of the problem, inaccuracies in public information, and public antipathy to the drug addict.

Another aspect of the Institute's involvement in the community's planning is that associated with the mental health needs of our aging population. Only the barest beginnings have been made toward resolving the major medical and social problems related to the process of aging in modern society. We have had innumerable requests from the states for technical assistance in planning for elderly patients in mental hospitals, in setting up community facilities such as day centers and foster homes, and in promoting cultural acceptance of older people's assets.

The Institute has also assumed a major role in community guidance and research on delinquency. Over a half-million dollars has been allocated in the last several years for research into etiology, institutional treatment and management, development of screening devices to distinguish delinquents from non-delinquents.

The difficulties in most state delinquency programs are the great gaps in continuity of planning and guidance. Responsibility for an individual child often shifts back and forth from the courts to public or voluntary child-care agencies, clinics, and various local and state institutions. While certain avenues of cooperation do exist, there is a large demand for more coordination and for more trained personnel, including training programs for parents, police, pastors, educators and others who are directly concerned with children and youth in difficulty.

One other problem in which there has been a marked increase in effort and attention is mental retardation. In this long-neglected area, we have seen promise of accelerated progress as the result of new findings in etiology. There is now substantial evidence which indicates that mental retardation, like schizophrenia, is not a single entity, but many conditions related to genetic, developmental, or other physical influences as well as psychological and sociological factors.

The problem in retardation is the same cry for more research, more services, more personnel. Diagnostic services are particularly deficient. Neither specialized clinics for the retarded nor the broader pediatric and mental health clinics have successfully dealt with the problem. In this case, we conceive ours as a 2-way job—sponsoring and developing

specialized services and educating and redirecting the emphasis of the general clinic.

TRAINING

In the second aspect of the Institute's program, specifically that dealing with the training of personnel, we feel we have also made major gains. Since the program began, more than 4,000 persons have received support for training and over 9,000 have received training in centers assisted by mental health grants. In awarding grants to training centers, it has been our policy to urge the selection of trainees interested in public service, teaching, and research careers.

Besides the grants awarded to universities, medical schools, schools of public health, the student traineeships, and the support of projects to evaluate teaching methods and training procedures, our concepts of training have enlarged to include sponsorship of educational conferences and the training of other people besides those traditionally associated with mental health professions. We are now doing something about the training of ministers, lawyers, school teachers, pediatricians, and general practitioners. One current grant to the Law School of the University of Pennsylvania is to develop the content and methods used in training law students in the behavioral sciences. Another example is grants to institutes for general practitioners, pediatricians, psychologists, and other professions to acquaint them with new knowledge concerning mental retardation and techniques for counseling parents in the management of the retarded child.

RESEARCH

Research, the third phase of the Institute's integrated program, ranges from basic studies of the morphology and pharmacology of the cell to evaluations of the psychotherapeutic process as well as the social structure of mental hospital wards. This comprehensive research program is conducted in 4 ways: in the Institute's own laboratories; through fellowships for advanced training in research techniques; by long-term grants to career investigators; and by support of independent research. At the close of the year 1955, there were 218 active grants in institutions and professional organizations in 33 states, the District of Columbia, and Puerto Rico. The increasing attention to support of research and the increasing capacity to carry on research is evident by contrasting the current figures with the 25 research projects approved in 1947. Because of this increased research potential, we see a rapid trend toward large, multidiscipline, program-type grant support.

THE PROBLEMS

In discussing the programs of community services, research and training, I have indicated that there has been major progress and that we expect even further gains. Mention of the problems that we have encountered must also be made to bring perspective into this evaluation.

First and perhaps foremost, we have had to wrestle with the problem of interdisciplinary barriers. This has been our experience—across the board—despite lip service to a holistic concept which does not partition psychic man and physical man. To practice what we preach, we have organized the Institute along interdisciplinary lines. From the beginning we have set out to inculcate among psychologists, psychiatrists, sociologists, and neurophysiologists, a self-image, not of their professional specialty, but of a mental health worker. I believe we have succeeded to a large degree.

For example, two of the most important developments in research and programming have come from the contributions of the statistician and the social scientist. These disciplines are relatively late additions to the mental health team. Delay in utilizing their knowledge was due to the strong resistance from many quarters. Psychiatrists, particularly, were suspicious of the statistician. They and other critics said the statistician's business is counting. They held that mental hospital populations are in many respects uncountable entities since each patient is an entity unique and unduplicated. This thinking had grown naturally out of the concept of individual differences which has always been so important in psychiatric concepts.

Finally, we succeeded in overcoming the misgivings of our reluctant colleagues. Basic, workable concepts and approaches were

evolved, and at long last we were able to move forward in gathering psychiatry's vital statistics. The collection and evaluation of data from clinics and hospitals all over the country have served as one of the strongest stimuli to research and service. The statistician's work in connection with standardization of nomenclature and reporting in the mental hospitals has raised a whole host of questions concerning etiology and the type of community services that can and should be provided.

A second major strength to emerge, once we were over the disciplinary barriers, was the social scientists' contribution to knowledge of the epidemiological factors in mental disease. This, as you know, has been one of our weakest links. One of the Institute's most significant social studies has been conducted in cooperation with the State of Maryland. This investigation has centered around the town of Hagerstown where for nearly 40 years the Public Health Service has been gathering health records. These long-term records have been used to study differences in the life histories of individuals who are admitted to mental hospitals in comparison with a matched group who have never been hospitalized for mental illness.

Results of this study have shown that social isolation does not enter directly into the schizophrenic process. Moreover, the evidence indicates that social isolation is not a crucial, predisposing factor in the development of the disease. This finding points up the need for intensive research upon the schizoid personality itself.

Closely allied to interdisciplinary barriers is the vestige of another problem that formerly caused considerable difficulty. As recently as 25 years ago there was a widespread disinclination among our medical brethren to accept psychiatry. Their reluctance was understandable when we were unable to supply them with finite and easily understandable answers to questions of etiology and treatment. This handicap, to a large degree, has been overcome as we have established a tradition of service to other physicians and as our own gains have become evident and known.

As I view it, the persistence of this difficulty is rooted in the teaching in our medical schools. Countrywide there are all too few schools making any real attempt at a multidisciplinary approach to the problem of illness. Real integration between psychiatry and such departments as surgery, obstetrics, and pathology is minimal. Elsewhere on the university campus, the same situation exists. Disciplinary barriers prevent free and comfortable communication between the departments of psychiatry, psychology, social sciences, and the like. In perpetuating this unhealthy situation which is detrimental to the best interest of all kinds of illness, the psychiatrist is no less guilty than the professionals in the other disciplines.

The need for trained mental health personnel has long been evident. There is, however, another crucial need—and therefore a crucial problem—for professional workers outside the behavioral disciplines. As psychiatry has seen the necessity to merge organic and functional man into a unit, conceptualizations have had to draw more from the basic physical sciences, such as chemistry and physics, and the biological sciences, such as pharmacology and physiology. To follow this work through, we have an increasing need for people with specialized training in these fields.

This has been not only a recruitment problem, but again one of breaking down the long-entrenched dichotomy of mind and body. As the organic aspects have acquired more prominence in research, the integrated approach has been plagued by pressures to put more money and more emphasis into one approach or another—not the balance we insist upon. We are constantly faced with demands for more biochemistry or for more social dynamics, or more psychoydnamics. Obviously the answer is that we need more of all, not more of just one. The tragedy is that if we do not follow this course, we are almost certain to get distorted answers and arrive at distorted conclusions which will lead us further astray and cost us more time in getting back on the main track.

Still another problem has been the need for more effective communication of our rapidly growing body of experiences and concepts. One of the great hindrances contributing to the lag in applying theory to practice lies in the enormous amount of information

that must be evaluated and assimilated by those working in the same broad field of human behavior. Since it is an almost impossible task to maintain currency with any specific aspect, the broader picture inevitably escapes one when one has other concerns. We are trying to facilitate this communication by sponsoring research conferences where more of the pertinent investigative fields can be reported. Thus far, we have sponsored research conferences in aging, psychopharmacology, communication, and rehabilitation.

This matter of communication, however, is not limited to exchange within scientific circles. Knowledge and understanding about mental health and mental illness are also essential for the public. The general public needs accurate and current information if there is to be community responsibility for the mentally ill and community provisions for mental health.

STATE PROGRAMS IN MENTAL HEALTH

We feel privileged in having the opportunity of contributing to the work of the states. Their programs represent some of the most important forward-looking activity in the entire mental health field. While they are tailored to individual needs and stages of development, the state programs, like the national program, have increasingly stressed outpatient and preventive services in the framework of added concern, and not at the expense of efforts, personnel and funds in the area of hospitalization. Probably the most dramatic development has been an expanding awareness that the mounting costs of mental illness can be stemmed only through a heavy investment in treatment, research, and training.

Another promising state movement, developing out of the National Governors' Conference on Mental Health, has been the growth of regional cooperation to provide maximum educational and training facilities. The regional program farthest advanced is also the first program—the Southern Regional Education Board. Other such cooperative arrangements are the Midwest Compact, the Western Interstate Commission for Higher Education, and the Northeast State Governments Interstate Mental Health Compact.

There are good programs in every state. Some are more extensive than others. One thing must be kept in mind, however; just as no state is now without a program, no state yet has a complete or ideal program. But this holds for all of our endeavors—those of the federal government and the communities as well. It has always been so, by reason that the nature of man and society is dynamic rather than static. As solutions are found to problems, new ones will arise and be solved in their turn. From the simple gesture of a helping hand we have gone on to create a network of community mental health services which has been woven into the structure of our society. Each new generation will build into its inheritance of mental health concepts the new goals arising from the changing social and cultural scene.

THE NEW YORK STATE COMMUNITY MENTAL HEALTH SERVICES ACT: ITS BIRTH AND EARLY DEVELOPMENT [1]

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HOW THE ACT ORIGINATED

Out of World War II came a tremendous increase in public concern over mental illness. The National Mental Health Act by placing emphasis on community mental health services marked the first major move to reexamine the 100-year-old concept that responsibility for mental illness and mental health belonged almost exclusively to state government. At about the same time the dilemma of the pyramiding social and economic costs of mental illness impelled New York State to form the interdepartmental Mental Health Commission in 1949.

The Commission which consisted of the state commissioners of mental hygiene, health, education, social welfare, and correction was given the major task of formulating a master plan for community mental health.

The various projects undertaken by the Commission staff contributed to a fund of information, the selection of issues and alternative solutions, and the formulation of concepts essential to the development of a long-range plan for community mental health services. The findings and conclusions were submitted in June 1953, and the Commission appointed a special committee to draft specific recommendations to state government. The committee's recommendations were embodied in the Community Mental Health Services Act which was passed unanimously by the 1954 Legislature and signed by the Governor.

PRINCIPLES AND PROVISIONS

The Act established a permanent system of state aid to localities for the operation of community mental health services. Perhaps the most fundamental principle in the Act is its placing of operating responsibility on local government, with the state paying half the cost. This emphasis on local responsibility is consistent with the "home rule" principle embodied in much of New York State law. It is also based on the professional conviction that a local mental health program can succeed only to the extent that local citizens accept it and identify with it.

The home rule principle also requires the program to be permissive, rather than mandatory. State aid is available but the choice is left to the localities whether to qualify for it or not.

Second, there was need for a new agency at the local level. Parts of a mental health program were provided in many communities by education authorities, by welfare officials, by public health departments and by courts, but nowhere was there a central planning body for mental health services. It was felt that comprehensive programming requires the combined efforts of health, education, welfare, judicial and correctional agencies, both public and private. Another premise was that although the treatment of mental illness is primarily the responsibility of the medical profession, the prevention of these disorders is a shared responsibility of all the service professions and the promotion of mental health is the responsibility of the total community. These concepts were embodied in the Act by authorizing a new agency of local government, the community mental health board. Of the 9 members of this board, 2 must be the ranking local health and welfare officials and 2 others must be physicians actively engaged in private practice. The other 5 may include a member of the governing body of the city or county; an officer or employee of a school district; persons familiar with practice in courts of criminal jurisdiction or children's courts; and members or employees of voluntary agencies.

The units of local government eligible for participation were determined in part by the

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nature of the program and in part by existing state statutes and precedents. Two factors were dominant: the high cost of mental hygiene clinics, and the shortage of trained personnel. These made it necessary to plan services for fairly large population groups. Eligibility was therefore extended to all counties and to cities with populations of 50,000 or more.

The important role of voluntary organizations in the development of services and the substantial support of mental health programs by nongovernmental groups could not be overlooked. Reimbursement to local government was therefore extended to include not only expenditures incurred through direct operation of services but also payments on contracts for the purchase of services from approved psychiatric service agencies or qualified psychiatric personnel.

The intent was to write broad enabling legislation in order to permit maximum flexibility of development and to allow for the differences among the state's communities. Some limits had to be set in the law, however. For legislative purposes the program had to be fitted into the over-all pattern of state services. The proposed law, moreover, had to set a realistic limit to the financial obligation the state was undertaking in the face of the pervasiveness and the diffuseness which characterize mental illness and mental health.

For these purposes, 4 types of services are declared eligible for reimbursement. These are: (1) outpatient psychiatric clinics; (2) inpatient psychiatric services in general hospitals; (3) psychiatric rehabilitation services for persons suffering from psychiatric disorders; (4) consultant and educational services. In practice the first 2 are quite specific, the third has few clear-cut precedents, and the fourth gives the state commissioner a great deal on which to ponder.

The state's financial obligation is limited by a ceiling of one dollar of state funds per year per capita of population. One other limit is the requirement that a qualified psychiatrist be appointed as director of the local mental health service. This gives a clear indication that this is a medical program requiring medical direction.

The community mental health board is empowered to review and evaluate services and facilities and to submit a program to the appointing officer and governing body. Within the amounts appropriated, it is authorized to execute the program and maintain services and facilities. It can enter into contracts for services and facilities, establish rules and regulations for the various parts of its program, and appoint a psychiatrist as director.

The director serves as chief executive officer of the board. He exercises general supervision over the services and facilities rendered, operated or supported by the board and over the treatment of patients in these services and facilities. He recommends program to the board, and carries on such studies as may be appropriate for the discharge of his duties or the promotion of mental health or prevention of psychiatric disorders.

The state commissioner of mental hygiene is empowered to review the work of all boards and directors, advise them in the performance of their official duties and promulgate regulations governing the granting of state aid. He is authorized to formulate standards of service, personnel, administration and equipment and to approve fee schedules. He may withhold state reimbursement, in whole or in part, for failure to comply with the law or the regulations.

DEVELOPMENTS UNDER THE ACT

As of May 1, 1956, the Act has been in effect 19 months. Eleven counties and the City of New York are now operating reimbursed programs. Seven other counties have passed local laws and are formulating programs. These 19 communities include 81% of the state's population. In 9 additional counties, some interest has been shown by local government, and in 17 others, organized citizen groups have taken some action in relation to the Act. All together, over 90% of the state's population have shown some level of organized interest in instituting a program under this Act.

In terms of money, in the fiscal year which ended March 31, the state paid out $4,829,044 in reimbursement to community programs. Estimated state aid for the current year is $8,300,000. Local government's share brings this to $16,600,000 and represents almost a

50% increase over expenditures for community mental health services in the year preceding enactment of this law. How much of this represents new service created under the impact of this Act and how much is only the shift to the state of half of the cost of local services? Certainly not all of it represents new service inasmuch as reimbursement was extended to existing as well as expanded or new services. It was not expected that a great deal of new service would be created at the very beginning. In most instances, first efforts of new local boards were directed toward assessment of resources, study of needs, planning and trying to integrate what was often a very confused pattern of piecemeal services.

A quite respectable amount of new service has been created, however. The program has resulted in substantial expansion of psychiatric divisions of publicly operated general hospitals and sizeable support for psychiatric services in voluntary general hospitals. A majority of the pre-existing community clinics have been enabled to add staff or to increase clinic hours. Over $1,000,000 of new public funds is going into the support of clinics operated by voluntary agencies, almost all of it for expanded service. Outside of New York City, 6 full-time clinics and 1 part-time clinic have come into existence or have been authorized and are recruiting staff. In New York City, new clinics are being organized in the courts, in correctional facilities, and in municipal general hospitals, and mental health services are being expanded in the school system and in the Health Department. Before the Act was passed New York City was spending about $9,000,000 annually on reimbursable types of mental health service. For the year beginning July 1, 1956, they have budgeted $15,500,000.

In general, then, there has been significant forward movement in the planning and integration of programs, and a substantial increase in services provided. We have also been impressed by the tremendous groundswell of citizen interest, and of citizen readiness to take action when given local responsibility.

PROBLEMS IN ADMINISTERING THE ACT

Most of the problems and questions we have encountered in administering the Act were anticipated while the Act and the implementing regulations were being drafted. Many were deliberately left as open questions with tentative and temporary operating answers. Perhaps because they have been approached in this way, the problems have not created serious difficulties. Agreement has been general, cooperation and encouragement almost universal. The problems are, however, worth recounting for 2 reasons: First, they will probably be encountered by any state attempting to set up a master plan for mental health services. Secondly, discussion of these problems is one of the best ways of clarifying fundamentals, since most of them involve questions of philosophy and policy.

One of the first questions we had to deal with concerned some workable definition of what constitutes a reimbursable mental health service. In the past decade, many service agencies have come to consider themselves as mental health services. Undoubtedly, they have mental health orientation and in all probability are doing some good in the field. But if these were accepted as reimbursable it would open the door to anyone who professed an interest in the welfare of man. A line had to be drawn somewhere. Where and how to draw it was the problem.

We need sharper definitions of roles of the different helping professions and service agencies to provide meaningful coordination and effective utilization of our resources. The roles are determined by the kind of person served, the kind of service given and the kind of person who gives the service. It is difficult if not impossible to define a mental health service by the kind of person served. Since we are discussing preventive mental health services, almost by definition we all need these services.

It is a little easier to build the definition around the kind of service given. Some activities are clearly and unmistakably mental health services and nothing else. However, other activities are not so clear. For example, how does one distinguish a mental hygiene clinic from a family service agency which includes in its consultant staff the 3 disciplines of psychiatry, psychology, and psychiatric social work?

As a practical rule of thumb, we are defining a mental health service mainly by the kind of person who gives the service. Only

those agencies are considered psychiatric, for purposes of reimbursement, in which the relationship between the agency and the people it serves is essentially a doctor-patient relationship and in which the service is given by a qualified psychiatrist or by other qualified personnel acting under the direction of a psychiatrist.

Another problem concerns the integration of the efforts of various disciplines. How much psychiatric supervision should be required in a clinic? What should be the ratio of hours of psychiatry to hours of psychiatric social work and clinical psychology? We have not been satisfied with any mathematical ratio proposed, and have put the emphasis on the principle that the psychiatrist must assume medical responsibility for all patients served.

How does one differentiate the functions of a school psychologist? Which of his activities require psychiatric supervision? How can the mental health programs of the school systems be integrated into the total community program? In our state, school districts rarely coincide with political subdivisions and funds raised by school taxes cannot be expended for any program not directly operated by the schools. In New York City, the problem is less because the school district exactly coincides with the city lines and a large mental health program is administered by the school authorities, under general supervision by the mental health board. In other parts of the state, the best we can hope for is flexible voluntary cooperation which will make available to schools whatever resources have been established in the community.

In the Act's declaration of purpose much emphasis is placed on prevention, and this emphasis raises another problem. The emphasis is partially carried into the main body of the Act by the broad definition of psychiatric disorders and by the provisions for reimbursement on the total operating costs of outpatient clinics and general hospital inpatient services. Thus ample provision is made for the most widely accepted techniques of secondary prevention, namely, early diagnosis and treatment. The inclusion of consultation and educational services adds another element—early case finding. By intent, these services are also viewed as the Act's contribution to primary prevention or what has been defined as specific efforts so to deal with the facts of community life as to reduce the frequency with which personality disorders occur. The trouble is that, although everyone is against mental illness and wants to prevent it, we don't know very much about how to do it. We have always assumed that education about mental illness and mental health is preventive. But there have been few evaluative studies of either mental health education or consultation programs.

Another set of questions revolves around the division of responsibilities among state government, local government, and voluntary agencies. We shall touch on a few of them to illustrate their general character.

The Act provides reimbursement for inpatient services only if they are in a general hospital. What should be the time limit for psychiatric care in the general hospital? Where should the line be drawn between state hospital and general hospital psychiatric care? There are strong sentiments against limiting the general hospital to the screening and diagnostic functions of a psychopathic service. There are equally strong feelings about shifting away from state government the financial responsibility for caring for the mentally ill. A strong case is made for the integration of psychiatric services with all other medical services by an expansion of general hospital psychiatric divisions. In addition to the obvious medical values, general hospital psychiatry is an antidote to the stigmatization of mental illness. On the other hand, many general hospitals resist the addition of a psychiatric service.

Inpatient services for emotionally disturbed children present unresolved questions concerning the responsibilities not only of state and local government but also of voluntary agencies. As our law now stands, a unit for emotionally disturbed children established in a general hospital would be reimbursable. However, if that unit were set up as a separate organization and in separate quarters, not part of a hospital, it would not be reimbursable, except as to salaries of certain professional personnel. The total cost of operation would not be reimbursable. In our state most child-care facilities are operated by

voluntary agencies with financial support from local public welfare departments. But there is great need for inpatient psychiatric facilities for children, and great pressure on the state to establish and operate them. Should inpatient psychiatric services for children be fitted into the prevailing system of child care under local responsibility or should the state hospitals undertake these responsibilities?

At the opposite extreme of the life span is a similar problem of facilities for the aging who are mentally ill. The charge is repeatedly made that too many of these people are being put into state hospitals, and that many of them would not need to be there if some other, perhaps intermediate, type of facility were available. At the present time, our law permits reimbursement for a geriatric psychiatric ward in a general hospital; but a separate nursing home which provides domiciliary care and supervision for the same categories is not reimbursable. This issue becomes more pressing each day.

Another question concerns the future relations of local community programs with the community programs carried on by the state mental hospitals. All of the New York State hospitals carry on some community services in their own areas. Both the community and the hospitals have profited from these services. At a recent Mental Hospital Institute in Minneapolis many hospital people expressed the view that a community program should be centered on the public mental hospital. This is a successful and rewarding practice in Great Britain where small hospitals serve small areas. However, in our state with large hospitals serving large geographic areas the majority of the population is not in close proximity to a state hospital, and it seems unrealistic to center community programs on the hospitals. It would be quite unfortunate for the hospitals were they to be deprived of all community work by the establishment of local services. Our present thinking, therefore, is that the responsibility for community services should be vested primarily in local government, but that professional personnel of the state hospitals should have an opportunity to serve in the locally operated program to the extent practical.

Still another group of problems centers around the relationship of our program to the private practice of psychiatry and to organized medicine On one side are some physicians and medical societies which have a deep-seated suspicion of any governmental move into the health field. Representatives of the State Medical Society were consulted early in the consideration of our legislation, and some changes were made on their suggestion before final enactment of the law. As our law now stands, it contains provisions which meet the objections of most physicians. At least 2 members of the local mental health board must be physicians engaged in private practice. There are ample safeguards to insure medical standards and medical supervision of all approved services. There is also permission for local services to establish fee schedules and prohibition of reimbursement for services to patients who are able to pay for private care. The Council of the State Medical Society had endorsed the legislation, and there have been only a few isolated medical voices raised against it.

Recently, we have been asked questions about the apparent exclusion of the private practice of psychiatry from our pattern of community mental health services. At the present time, the services of individual psychiatrists may be reimbursed if they are used for consultation to public and private agencies, for approved educational projects, or for examinations in connection with certification procedures. Treatment by private practitioners has been excluded from reimbursement, however, and this substantial mental health resource is not being fully utilized. This omission will doubtless be remedied when we can see our way through the administrative difficulties.

There is one last problem which we must face. At this moment in the development of mental health programs, we are in the position of having to rely almost exclusively on the professional training of personnel for predicting the soundness and effectiveness of the services to be rendered. Consequently we are compelled to set fairly high standards for such positions as directors of mental health services, clinic directors, and for the other staff positions and disciplines engaged in community mental health services. The rapid expansion of our program, at a pace which

was entirely unforeseen, has created a demand for qualified personnel that far exceeds the available supply. Furthermore, a few training centers prepare our professionals for community oriented services. We require a director of a mental health board to have 5 years of psychiatric training and experience, of which 2 years must have been in a recognized mental health clinic. A director of an all-purpose clinic must have spent 1 of his 5 required years of training and experience in a child guidance clinic. Since it is so difficult to recruit people with these qualifications, we are being constantly pressed by communities to lower the requirements. Can we afford to do so? Can we afford not to?

In an effort to relieve the shortage, the state is beginning this year a substantial program of stipends and grants to provide training for community mental health services. It is our feeling that training is primarily a state rather than a local responsibility because of the uneven distribution of training centers throughout the state.

Summary

We have described the origins, principles, and provisions of an attempt to establish a comprehensive community mental health program for an entire state. Widespread citizen readiness for coordinated and integrated planning of mental health services has been demonstrated, as has local and state government willingness to finance large-scale programs. This has focussed attention on the need for developing methods of evaluating the effectiveness of services and for more research especially into the causes of mental illness. The need for training of professional personnel is stressed; the demand greatly exceeds supply, and teaching centers give little training in community oriented psychiatry.

THE OPERATIONS OF THE NEW YORK STATE COMMUNITY MENTAL HEALTH SERVICES ACT IN NEW YORK CITY [1]

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When the State of New York adopts a law of state-wide applicability it does so with the knowledge that the more than one-half of its population residing in the 5 boroughs of New York City will be affected. Dr. Hunt [3] has already reported on the decision to make the administration of the Mental Health Services Act a local matter. One of the earliest "localities" to begin operations was the City of New York with its 8 million people.

Unlike many other areas of the state, the City of New York already had, prior to the enactment of the Community Mental Health Services Act, been operating mental health programs. It had 2 general hospitals with approximately 1,000 psychiatric hospital beds, and 5 more general hospitals with psychiatric outpatient departments. Within its Board of Education, it operated the Bureau of Child Guidance, perhaps the largest coordinated system of child guidance clinics in the world. It operated through its Youth Board, and directly as well, psychiatric clinics in at least 4 branches of the court system and it furnished a modicum of psychiatric consultation services to prisoners under the care of the Department of Correction. The Department of Health had experimented for several decades with methods of parent education, and of furnishing services to preschool-age children. All these as well as other less expensive operations amounted to the expenditure by the city of about 9 million dollars in 1954.

In addition, the city supported certain voluntary mental health services through contracts with its Youth Board to serve particularly difficult cases.

These functions were scattered in different departments and agencies of the government, under the general control of the Mayor and Board of Estimates of the city. There was no coordination, no planning or supervising agency to direct the diverse operations. It is the Community Mental Health Board which, in addition to the responsibility of budgeting these various programs, has the power and duty of evaluating and coordinating services and their planning.

The State Community Mental Health Services Act permits reimbursement to local boards for the improvement and expansion of services in 4 general areas: outpatient services; psychiatric beds in general hospitals; rehabilitation services to persons recovering from mental illness; and consultation and education services to professional persons, various types of social and health agencies, and parents' groups. Specifically embraced in the Act are such categories of illness and/or malfunctioning as mental deficiency and epilepsy; alcoholism is not excluded. Services to all age groups are permitted. While due provision is made for medical direction of programs, the participation of other disciplines is insured by permission to function in other than medical agencies *per se*, and by insistence on the classic professional team in outpatient services at least. Implicitly and otherwise, the state continues to provide long-term care. The state also reserves for itself primary responsibility for research and training activities. I stress the word "primary"; this does not mean that the Community Mental Health Board has no concern with these functions. In practice, city and state overlap in these important fields. We in the city tend to favor support for facilities that undertake research and training in conjunction with service programs, on the basis that quality and flexibility are more likely to be built into such programs; the state, by support of research and training through the administration of National Mental Health Act and other funds, tends to improve services where they operate, as well as to develop demonstration proj-

[1] Read in the symposium, Community Organization for Mental Health, at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

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[3] See page 680, this issue.

ects which, when sufficiently proven, can be taken over by the local Community Mental Health Board. This very overlapping tends to encourage city-state partnership of a very constructive sort.

There is still some controversy as to how much the new board was looked on by the city government as a means of reducing its previous appropriations. Like every other local government, the City of New York has smaller taxing resources than the state, and feels that as a large municipality it does not get its share of the state's resources. The passage of the Mental Health Services Act offered the opportunity for immediate relief of one-half the cost of existing mental health services. This had been sought for some years; its arrival was greeted heartily by the fiscal authorities of the city. There are those, of course, who feel that this gain was all the satisfaction the city desired of the new Act; the development in the 18 months since it was put into effect will allow you to estimate the truth or falsity of this belief.

In addition to the functions of the city government already mentioned, there were more than the usual state operations touching the city. As usual, the metropolis furnishes somewhat more than its share of the patients in state psychiatric hospitals and institutions for mental defectives; practically all these cases were processed through municipal hospitals. The state follows patients released from state hospitals and the program has recently been expanded and improved. Furthermore, the state had made direct grants to perhaps a dozen voluntary clinics in the city. These grants-in-aid were also incorporated in the new board's responsibility.

It was into this rather confusing and somewhat confused picture that the new Community Mental Health Board stepped in December 1955 to attempt to plan for, coordinate and expand and improve services.

What were its resources for the task? First, the board had financial authority, absolute as regards the state's reimbursement. Within the city government, its appropriations are under the same kind of budgetary review as those of any other city department. No appropriating authority ever has complete power, however. Essential services, even when there were sound and ample reasons to feel that they should not go on at the level they were found, had to be continued. Furthermore, in some cases appropriations had to be recommended before the study and planning necessary to be sure of what moves should be made to improve services, could be done. The need to act before full study beset the board at every hand, and there is no doubt that the need for immediate action in many cases perpetuated existing and traditional practices that more time in planning might have terminated. After 18 months one finds that the traditional practices tend to include board support as a reason for their continuation, a paradox that is no less true than disturbing, even though there are bright spots to be detailed later. The experience here is, as it is so often for new agencies, that the new broom could not, by force of previously existing circumstances, sweep clean.

After the board secured its director, the first attack was on the problem of what sort of organization was needed to do its job. All agreed that a planning, a supervisory and negotiating, and a financial staff were needed. But not all agreed on what the planning staff should be, and few dreamed of the extent of the accounting job eventually entailed in operating the board in New York City.

One of the first questions the board tackled was how to establish a base line against which to evaluate its activities. New York, like most of the rest of the world, had no uniform way of reporting its outpatient diagnoses and its treatment procedures. There were some who felt that a full survey of resources and their operations should precede any other move on the part of the board. As already noted, this could not be done since the establishment of the board brought immediate, emergent problems. A preliminary survey of resources and a comprehensive view of what the operations of the board might be was completed by consultants; a good deal of this work was done before there was any more than a skeleton staff.

It was finally concluded that the problem of surveying the New York Mental Health scene was an on-going proposition and that a single intensive survey could not produce a "base line of operations" against which to measure future accomplishment. The result was that the primary assignment of the Division of Research and Planning was to in-

stall a modification of the Federal outpatient reporting form (the modification was one prepared by the state Department of Mental Hygiene) to provide the fundamental data for the long-term evaluation of the work of the board. While the research division has been able to begin and complete several interim tasks of considerable importance, this remains still its primary assignment.

One of those interim studies, still in a more or less confidential state because policy changes expected to come from its findings have not yet been determined, concerned the use of municipal hospital psychiatric beds. These hospitals were planned as psychopathic hospitals when that term was current and had the meaning of acute treatment and screening resources for a metropolis, but time and tradition was found to have reduced the treatment function to so low a level that the average length of stay was but 15 days. The overcrowded hospitals were being used to relieve social pressures but there was, it appeared, too little of treatment in process, with the notable exception of the children's wards. The hospitals are also heavily loaded with forensic work; no survey had been done to determine whether this load might be reduced by better consultation services. Beds which might better be used for treatment purposes appeared to be occupied for administrative reasons. The establishment of these conclusions by clearly presented research findings should make possible an increase in medical efficiency in the use of psychiatric hospital beds.

Another interim study was designed to throw some light on the problem of the efficiency in serving the population of the city of large, centrally-located clinics as contrasted with those located peripherally in the city and which, generally speaking, are smaller units. The results of this study were not satisfying. What we believe we found was that the level of need for service is so extreme in New York City that people will travel anywhere for it. Where expansion of service is most desirable could not be determined by the methods used.

A survey of resources is much simpler than a survey of services rendered. In the former area the research division has produced several documents and maps.

It is possible to map the city by intensity of psychiatric clinics' professional staff time available to the population. For this the districts established by the Department of Health are used as the unit. These average 250,000 population, but of course show considerable variation. Such a map shows differences from less than 100 hours a week of professional time available in the outlying section of Brooklyn and Queens, to more than 4,000 hours a week in lower Manhattan and central Brooklyn. Services are, in general, concentrated in areas serviced by hospitals, settlement houses (which in New York tend to furnish some psychiatric services) and in areas in which special efforts are being made to control juvenile delinquency. Unfortunately, this map proved to be in too great detail for satisfactory reproduction in print.

Figure 1 is a spot map of the various outpatient psychiatric facilities, including those in hospitals and independent community clinics. Here you will note that the older parts of the city, particularly Manhattan and central Brooklyn, are much better served than the newer residential sections of the city. This, of course, is related to the distribution of transportation facilities.

The finance division has the responsibility for keeping track of the financial operations of the board. One of the principal problems

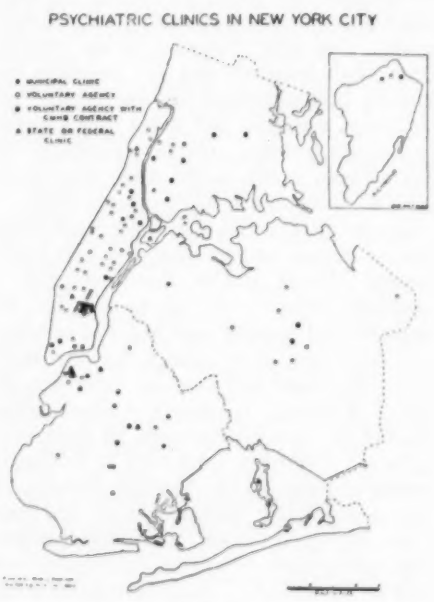

FIG. 1.

that has had to be dealt with is the persistent proclivity of contracting voluntary clinics to regard the board as a sort of philanthropic foundation that has, or could have if it wished, authority to recognize needs and supply funds to meet them and leave that an end of the matter. Actually, the board, as a department of the city government, is under the kind of financial control that allows every taxpayer to account for every penny of his investment in his government. This fact, and its consequences in accounting for public funds expended, has worked a considerable hardship on many small agencies who were used to rather comfortable and convenient though honest bookkeeping methods, and now had to adapt to strictly formal, auditable procedures. The finance division has had a great deal of teaching to do. The contract negotiating and supervisory staff—these personnel were recruited from psychiatric social work largely and were not accountants—had to be taught so that they in turn could educate the individual agencies in the methods of accounting that are acceptable in government. The new methods have probably increased the cost of service to patients slightly because specialized personnel are required; on the other hand, the new bookkeeping methods have sharpened budgeting, and consequently planning, in participating agencies. I venture to hope that increased efficiency on this plebeian financial level may also result in increased efficiency at the level of patient care.

Accounting in the municipal agencies also presents some problems, for under the Board, accounts for psychiatric services must be kept separate in order that they may be justified for state reimbursement. Achieving this in a hospital organization expending 130 million a year is no small task and involves disturbing traditional practices that have very high coefficients of friction. The process of installing them, however, has had considerable effect in sharpening the recognition of the needs of these services as a part of the hospital services to the citizens of New York.

The production of increased and improved mental health services to patients is the function of the Division of Contract Negotiations and Standards. This is the primary field staff of the agency. It converts the board's policy discussions into patients treated, changes dollars into services, and sees to it that the dollars are well spent after they are committed. At present, this staff is composed entirely of psychiatric social workers with administrative experience, though the civil service requirements allow employment of clinically experienced people from psychology, nursing, and social science as well. The work of this division has all the variety that the various mental health services provide, from the 600-bed psychiatric section of one municipal hospital to the 7-bed section of one of our smaller voluntary general hospitals; from a voluntary service with an operating budget of $400,000 a year to one that operates one night a week and had an annual budget of $12 before the board came to its rescue. The staff of this division is responsible for maintaining standards in both voluntary and public services and these personnel are the representatives of the board in the community.

For the most part, it is this hard-pressed staff that must tell the agencies when no money is forthcoming for expansion and, in more happy situations, originate recommendations for justifiable expansions. It must also bear much of the frustration of seeing opportunities that cannot be grasped because there is no time to get to the clamoring agencies all at once. It is no exaggeration to say that the rest of the organization exists to serve and to evaluate the work of this division. They produce the movement to be evaluated.

Contract Negotiations, Finance and Research and Planning are, then, the basic operating units of the board staff. The psychiatric professional personnel are supervised and directed by an assistant director; the finance division is supervised and directed by an executive secretary who is also responsible for personnel management, office management and, very importantly, for organizing material in suitable form for action by the city government. (As you can see, the whole operation is planned so that the director has nothing at all to do!)

In describing all this machinery, it is usual to have the question asked, "What happened to the patient?" Has the operation actually got services increased; has any significant change taken place because of the operations of the board? Has it made any real difference that a potential of around 8 million dol-

lars of new money has fertilized the mental health efforts in New York?

It has made a difference. It is impossible to use numerical evaluation since standard reporting in contract clinics is less than 6 months old at this writing. Yet every clinic holding a contract is reported to be serving considerably larger numbers of patients by the staff in contract negotiations. Seventy beds in voluntary general hospitals are being supported at the rate of 16 dollars a day; a year ago none were supported and only a few certain endowed beds were open to patients unable to pay full hospital rates. Psychiatric outpatient services in voluntary general hospitals are being supported. Expansion of services in public agencies has been somewhat slower; the life-giving money has yet to be felt in the veins of the long-starved municipal hospital psychiatric sections. Administrative detail has been particularly difficult to master in this area. Better classification of prisoners has been accomplished, however, by the Department of Correction, and Health has had the opportunity to expand both its parent advisory services and to build a central executive structure for future mental health program growth. Court psychiatric services have been somewhat strengthened, though there remains a tremendous planning job to be done in connection with an impending reorganization of the courts.

Perhaps more important than any other accomplishment of the board is the simple fact that it exists as an integral part of the city government, acting as an educational force and as a gad-fly to keep the attention of the government and its agencies focused on its citizens who suffer from or who are threatened by mental ill health.

We have attempted here to interweave interpretation and commentary with descriptive material on the CMHB program. It seems important in addition to point out several broad implications that may be drawn from the very existence of the program, for they are important philosophically far beyond the borders of New York State:

First, the very existence of the Community Mental Health Services Act constitutes official and legal recognition of the fact that mental health is a public health problem, inasmuch as the problem is widespread, cannot be adequately met through private means, and requires concerted community action. This in turn justifies the establishment of an appropriate planning, coordinating and financing body in each community or county, as the case may be.

Second, the law recognizes a permanent public responsibility to share in the costs of mental health programs under a variety of auspices, with funds granted not on a temporary "seed-money" basis, but as a continuing subsidy with the recognition that every community, even the richest city in the world, is entitled to a permanent and centralized source of aid for its services.

Third, there is implicit in the law the concept that community mental health, while a medical concern and a matter for medical direction, is not identical with psychiatry as such or coincident with psychiatry, but broader than and inclusive of it; thus we have the concept emerging through this law that mental health is a *community-wide* responsibility, that the program is to be under both professional and lay auspices, and that mental health is promoted and fostered not solely through medical treatment, but also through a variety of institutions and agencies, with numerous disciplines joining in the effort. It is through this concept that the phrase "community mental health" becomes more than a pious wish, but is a living concept whereby concern with mental health becomes truly community-wide and, hopefully, mental health becomes diffused throughout the matrix of the community itself.

Fourth, it is conceivable that if the purposes and potentialities of the Act are fully realized, the inexorable and relentless flow of sick persons out of the community into isolated, gargantuan state institutions may be diminished, and that rapid, effective, and timely treatment will be available in the community itself to persons who become mentally ill. When this occurs, psychiatry will have 2 important attainments to its credit: (1) it will have gained the status of all the other medical specialties, insofar as locale of treatment is concerned; and (2) it will be in a position at last where it can pervade and be closely integrated in the practice of other branches of medicine in the same institutions, in the same clinics, and in the same community.

PSYCHOPHYSIOLOGICAL INVESTIGATIONS IN CARDIOVASCULAR STRESS

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The fact that psychological or emotional changes may cause physiological disturbances has been demonstrated for many years. From these demonstrations have come multiple attempts to predict physiologic alterations from psychological test data, as well as attempts to find the psychological common denominators in a given syndrome. These attempts frequently show low correlations because, among other reasons, "broad band" personality assessments often are not sensitive enough in a specific psychophysiological area, and tend to "bury" the desired information.

In this preliminary report of a study under way at the Aero Medical Laboratory, an attempt is made to demonstrate that with proper attention to data obtained from other disciplines, and with appropriately focused psychophysiological techniques, precise relationships may be established between the physiologic and psychiatric aspects of the individual. The approach utilized illustrates some of the psychosomatic aspects of the cardiovascular system.

Some years ago Hess(1) demonstrated that there existed 2 centers in the hypothalamus. One center, when stimulated, elicited a fear reaction in the animal, the other a rage reaction. Separate work by von Euler(2, 3) showed that urinary adrenalin increased when the fear center was stimulated. Another center stimulated produced an increase in urinary noradrenalin. Although not yet precisely demonstrated, this "noradrenalin" center may prove to be identical with the rage center. Whether this is so, or whether, as von Euler believes, noradrenalin is primarily released in response to cardiovascular stress such as activity, rather than in association with rage, remains to be seen.

Other work in animals has suggested that aggressive, attacking animals, such as the lion, chronically show noradrenalin excesses, while fearful, retreating animals, like the rabbit, reveal adrenalin excesses(10).

It should be pointed out that previous commercial preparations of adrenalin have raised the blood pressure. It is now established that this blood pressure raising propensity was due to the contained noradrenalin fraction. Purified preparations of adrenalin cause a cardiac acceleration and a peripheral vasodilitation, with a concomitant hypotensive tendency. Noradrenalin, on the other hand, results in peripheral vasoconstriction and a hypertensive effect.

The above work suggested to Funkenstein and others(4-6) that affect state would cause variations in the adrenalin/noradrenalin ratio. It was demonstrated that when anger was produced: noradrenaline-like effects occurred. At the same time, the response to an injection of mecholyl (methylated acetyl choline) was an increase in blood pressure. Similarly when fear, depression, or anxiety was the emotion produced, mecholyl caused a decrease in blood pressure and adrenaline-like effects were seen.

At the Aero Medical Laboratory experiments have been under way determining the parameters involved in "G" tolerance. The level of G-force at which subjects black-out or lose their vision depends on the ability of the cardiovascular system to maintain the blood pressure at the head and eyes against the tendency of the centrifugal force of the centrifuge to pull the blood away from the head. Thus the human centrifuge represents an excellent experimental situation in which to study cardiovascular stress responsiveness.

Anecdotal material led us to the observation that subjects' variations in black-out level seemed correlated with their affect state, and that psychological differences appeared to exist between low "G" and high "G" tolerance subjects. It seemed most likely that these variations were ultimately

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due to different degrees of efficiency of the compensatory blood pressure response to the cardiovascular stress. Assuming the correctness of Alexander's and others' postulates(7, 8) we took a calculated risk. The decision was made to study aggression and its handling, rather than the entire personality. It soon became apparent that high "G" subjects seemed more outgoing and aggressive than low "G" subjects. In addition, the "G" tolerance of a subject at any given time seemed correlatable with aggression and the method the subject chose to handle it. Two subjects, observed for 8 months, revealed highest black-out levels just after they had expressed some anger or were relatively free from anxiety. Lowest black-out levels were obtained when they were worried, depressed, and anxious.

These observations led to the assumption that anger-out people or anger-out responses would result in high "G" tolerance while anger-in (anxious, depressed) people or responses would lead to low "G" tolerance, on the basis of the associated differential adrenalin/noradrenalin secretions, and the resultant differential blood pressure responses.

Preliminary confirmation of this theory came from an independent study of noradrenalin levels with progressive increase in "G" tolerance, by Goodall and Mehan(9). Although this work is only beginning, it suggests that noradrenalin is highest in subjects who "black-out" at high accelerations, and lowest in those who lose their vision at low "G" forces.

The reasoning that "G" tolerance was related to direction of aggressive expression led to the development of a projective test, heavily loaded with aggressive content and symbols, in the hope that it would be able to discriminate high from low "G" tolerance subjects. Eleven cards comprise the T.A.T.-like test. Drawings of people in various situations are presented to the subject who is asked to tell a story about each picture. The stories of high and low "G" tolerance subjects were compared, and the preliminary criteria of differentiation worked out.

The test criteria first used were as follows: High "G" subjects tend to identify with the aggressor, and tell active stories in which the hero is independant, persists in goal-directed behavior, is hedonistic or impulsive, and is comfortable about expressing aggression. Low "G" subjects identify with the aggressed against, tell passive stories in which the hero is dependant, easily gives up his goals, is usually reality oriented, and either denies or is uncomfortable about expressing aggression. We emphasize that these criteria are preliminary and require more elucidation.

In preliminary testing 13 protocols were prepared, consisting of 6 low "G" and 7 high "G" subjects previously tested on the centrifuge. These protocols were presented independantly to 2 clinical psychologists, who upon being given the criteria for differentiation properly placed 12/13 of the subjects. In addition, 33 further subjects were tested. The authors attempted to place these subjects in their appropriate "G" tolerance categories on the basis of the projective test. Using the criteria on a 6-point scale, a numerical score was obtained. Figure 1 illustrates that the subjects were placed in their appropriate categories with a high degree of success.

In most instances the test was not administered on the same day as the centrifuge ride. Thus, what was being assessed by the projective test was the usual way the subject handled or expressed aggression. When the test is given close to the time of the actual centrifuge stress, it is assessing the subject's affective state, at the appropriate time, and its accuracy in predicting "black-out" levels increases.

Double-blind cross validation studies now under way are taking this into account and

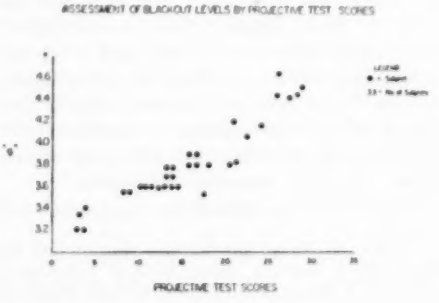

FIG. 1

suggest that the 92% accuracy of prediction will be maintained. Urinary adrenalin/noradrenalin determinations and blood pressure recordings support the data and will provide correlations between affective, biochemical, and physiological findings.

Precise relationships and accurate correlations between physiological and psychological aspects of the organism appear to be quite feasible if proper attention is paid to possible specificity of a psychophysiological problem, and if tools are designed specifically to obtain maximum information about a circumscribed area. Thus, in this paper it is strongly suggested that a striking psychological factor, namely direction of expression of aggression, is implicated as a major determinant of level of "G" tolerance. This in itself is interesting, but the biochemical and physiological reason for the finding is at least equally important.

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RAUWILOID THERAPY IN ALCOHOLISM

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The complexities and stress of modern life have led to widespread use of sedatives and hypnotics. They are particularly used in chronic alcoholism, with its sequelae of jitteriness, anxiety, unsteadiness, worry and remorse. The alcohol addict represents one of the largest groups of barbiturate consumers. As might have been predicted, many alcohol addicts have developed secondary barbiturate addiction. When such an alcohol-barbiturate addict is treated for an acute state of alcohol intoxication, ignorance of his barbiturate addiction may lead to omission of administration of this drug with resultant withdrawal convulsions or withdrawal psychosis.

Bromides should also be avoided as sedatives, not only because of the danger of habituation, but because of the not infrequent occurrence of toxicity(1, 2). We have found that bromides tend to be excreted more slowly in alcoholics, thus accumulating in the blood stream and causing toxic reactions, such as toxic psychosis. Even if Dupree's observation(3) is correct—namely, that toxic delirium during bromide intoxication develops only in patients with pre-existing personality defect—it is quite probable that the latent personality defect, so often a part of the alcoholic's makeup, suffices to precipitate the toxic delirium when bromides are used.

Thus, the need for a nonhabit-forming sedative or, as they are now called, a relaxant or tranquilizer, is undeniable. The first to come on the market was Tolserol, followed by a host of other mephenesin preparations. Similar relaxing therapeutic properties were shown in Dimethylane (2, 2-diisopropyl-4-hydroxymethyl-1, 3-dioxolane(4, 5, 6). Insulin in subshock doses combined with dextrose and thiamin has also been tried for the prevention of secondary drug addiction in alcohol addicts(7). Pharmacologically interesting was the combination of a vagal depressant (Bellafoline) with a sympathetic depressant (ergotamine) as a nonhabit-forming sedative(8).

In the autumn of 1954, Rauwiloid[2] (the alseroxylon fraction of Rauwolfia serpentina) and Rauwidrine[2] (1 mg. of Rauwiloid combined with 5 mg. of amphetamine sulfate) were investigated as tranquilizing agents for subacute and chronic stages of alcoholism. This study was carried out at the Washingtonian Hospital in Boston, and the staff of observers was composed of the medical director, 2 full-time assistant physicians, and 4 outpatient psychiatrists. The following presentation is a report of that investigation.

MATERIALS AND METHODS

An experimental and a control group were chosen, house and outpatients being included in each group. The total number of patients involved was 199, ranging in age from 22-83 years. All but 7 were alcohol addicts with a history of compulsive drinking for many years; in some, decades. The 7 exceptions were drug addicts: 2 barbiturate and 5 heroin addicts. Of these 7, 3 were also addicted to alcohol. The percentage of Negroes in the group of 199 was 3.5.

The investigation was carried out as a double-blind study, some of the patients receiving Rauwiloid (or Rauwidrine); the others being given 2 different relaxant drugs or a placebo, as controls. The medications were identified by code so that the 4 outpatient physicians and the senior resident physician did not know which drug was actually used. The second resident physician and the medical director applied a random order of administration; namely, patient number 1 received Drug A (either Rauwiloid or Rauwidrine); patients numbers 2 and 3 were given 2 different but comparable

[1] From the Washingtonian Hospital, 39 Morton Street, Jamaica Plain (Boston), Mass.

[2] Supplied by courtesy of Riker Laboratories, Inc., Los Angeles, Calif.

relaxants B and C (chemically pure substances, structurally related to mephenesin, and with a similar pharmacologic activity); patient number 4 received a placebo identical to Rauwiloid in appearance.

In the case of Drug A, only the medical director knew whether Rauwiloid or Rauwidrine was being administered. In most cases, Rauwiloid was given at the start, and replaced with Rauwidrine when a patient's response indicated that a mood-elevating drug was needed.

The dosages of the respective medications corresponded to recommendations of their manufacturers, and were as follows: Rauwiloid, from 2 mg. to 4 mg., b.i.d. or t.i.d; Relaxant B, 0.4 gm. to 2.4 gm., daily; Relaxant C, 1.6 gm., q.i.d; Placebo, one or two t.i.d. or q.i.d.

Administration of the drugs was started in the subacute stage of intoxication, *i.e.*, in uncomplicated cases, from 1 to 2 days after the beginning of hospitalization and the abrupt withdrawal of alcohol, as soon as dextrose, insulin, paraldehyde or chloralhydrate could be replaced by relaxants. In cases of acute alcoholic psychoses, they were started after termination of this state. In the case of drug addicts, the tranquilizing medication was started immediately after the gradual withdrawal of the opiates or the barbiturates, lasting from 10 to 14 days.

Whenever indicated, the medications were continued well into the chronic stage of alcoholism, for weeks and months. There were 3 indications for such prolonged administration of the drugs: first, in cases of tension and irritability or insomnia, which are not uncommon as steady or sporadic phenomena in nondrinking alcoholics; second, as preventive medication to help the patient stay on the "straight and narrow"; third, as an adjunct to psychotherapy.

RESULTS

One hundred and ninety-nine patients were exposed to the effects of Rauwiloid (or Rauwidrine) or 2 comparable tranquilizers for a total of 1,492 days—average of 7.4 days of observation per patient. In addition, 15 primary and secondary outpatients [a] had been given a total of 97 interviews. Both the patient's subjective feelings of response to therapy and the objective observations of the physicians, nurses, and attendants were considered in evaluation of the efficacy of the medicament.

The final results were tabulated in 3 main categories: (1) improved, (2) without significant change, (3) impaired. When necessary, the latter classification was further defined by a specific description, such as untoward side-effects, individual sensitivity or allergic responses. Improvement was assessed objectively by lessened restlessness, disappearance of tremor, and absense of apprehensiveness, as well as by the patient's own descriptions of the disappearance of such symptoms as tension, inner tremulousness ("butterflies in the stomach"), insomnia, inability to concentrate and the various somatic complaints of anxiety. Degrees of improvement were classified as mild, moderate, or marked.

Of the 199 patients observed, 50 received Rauwiloid or Rauwidrine; 50, preparation B; 50, preparation C; and 49, placebos; 134 or 67% responded with improvement. Only 2 showed a temporary impairment of their condition. One was a heroin addict who developed weakness, lethargy, and upper respiratory tract symptoms, including nasal stuffiness, on Rauwiloid. These symptoms disappeared when the drug was discontinued, recurred when a subsequent trial of Rauwiloid was attempted. Subsequently, this patient was given medication B with no unfavorable results. This patient, moreover, had a past history of food and drug allergy. Another patient complained of drowsiness on Rauwiloid. This disappeared when only half tablets were taken at a time.

The final results obtained with each of the preparations used are shown in Table 1.

[a] A secondary outpatient is a person who was originally hospitalized and then transferred to the outpatient department. A primary outpatient is one who was referred to our outpatient department directly, completely sober and without first undergoing a preventive treatment, such as the conditioned response treatment, which requires hospitalization.

TABLE 1

RESULTS

Medication	Improvement				Patients
	Marked	Moderate	Mild	Unimproved	Total
Rauwiloid and Rauwidrine	8	21	11	10	50
Drug B	7	22	13	8	50
Drug C	3	15	18	14	50
Placebo	0	0	16	33	49
Totals	18	58	58	65	199

CASE REPORTS

The following case histories have been selected as illustrating the efficacy of the drugs tested:

CASE 1.—A.B., male, a 33-year-old, slender, dark, white-collar worker, with an apologetic smile and a queer stereotype mannerism, since the death of his alcoholic father 10 years before, had suffered from insomnia and chronic alcoholism. He consumed "two or three quarts of beer" every night; recently, he would start to drink on Saturday morning and continue until Sunday night. Sporadic periods of depression, sexual deviations, and mild ideas of reference complicated his problem of alcoholism.

On January 19, 1955, he was placed on Rauwiloid, 2 mg. on arising and 2 mg. at 2:00 p.m. One week later, he could observe no change, but on February 2, he reported that he felt less tense and in better spirits. Progressive reports are best given in the patient's own words:

February 9: "I feel slightly drowsy, especially in the evening, but this does not interfere with my work. My craving for beer has entirely disappeared." To prevent drowsiness, the 4 mg. of Rauwiloid daily were prescribed in ½ tablet (1 mg.) doses at a time:

February 17: "The drowsiness is reduced. No craving for alcohol. I feel more relaxed."

February 23: "I feel O.K."

March 9, Patient complaining of headache: "Great weakness, no strength left, like a heavy load pressing on you. I feel drowsy." Rauwidrine was prescribed instead of Rauwiloid, one tablet on arising, ½ tablet at 11:00 a.m., ½ tablet at 2:00 p.m.

March 16: "I am sleeping fairly well. I have no drowsiness; all unpleasant side-effects of the first tablet [Rauwiloid] are gone."

March 23: "I sleep fairly well, feel physically O.K. I never crave for alcohol, feel enough pep to move around and work."

March 29: "People with whom I work either ignore me in a superior way or show hostility."

April 7: "I sleep well, co-workers still irritate me."

April 13: "O.K., no complaints."

The patient is continuing on Rauwidrine. This is one of the only 2 patients who had any side-effects with Rauwiloid.

CASE 2.—C.D., is a female, aged 45, depressed and recently separated from an unstable, physically abusive, immature husband. They have 8 children. Both the patient and her husband had been drinking excessively and steadily for 15 years. Her husband ridiculed and discouraged her attempts to overcome her alcoholism. The patient was irritable, tense, depressed and sleepless when, on April 8, she was placed on Rauwiloid, 2 mg. on arising and 3 mg. at bedtime.

April 15, the patient had returned to her husband's apartment, but used a separate bedroom. She reported: "The depression in daytime is much improved and does not occur often. I am able to control it." Prior to Rauwiloid medication, patient often cried uncontrollably. "I still can't sleep." Rauwiloid dosage was increased to 2 mg. on arising 1 mg. at noon, and 3 mg. at bedtime.

April 22: "I can't go to sleep before 1:00 a.m., but then I sleep well. I am somewhat dizzy in the daytime." The patient's blood pressure was 96/70, which is in the range commonly seen in patients of this type, in a non-acute stage. Medication was changed to 2 Rauwidrine tablets on arising and 1 at noon, with 3 mg. Rauwiloid at bedtime.

April 29: "I am beginning to sleep better, no dizziness."

May 6: Patient described her state as improving, and continued on the same medication.

May 13: "Improving."

May 20: "Depression almost gone. I sleep almost every night."

May 27: "I am sleeping well; the depression is almost all gone, but I felt dizzy during the last few days." Medication changed as follows: Rauwidrine, 2 tablets on arising, 1 at 11:00 a.m., 1 at 2:00 p.m., Rauwiloid, 3 mg. at bedtime.

June 3: "I am sleeping alright, but feel weak and lightheaded." Medication prescribed: 0.2 gm. caffeine and 3 Rauwidrine tablets on arising; Rauwiloid, 3 mg. at bedtime.

June 20: "I now sleep very well and need no bedtime tablets [Rauwiloid] anymore. Everything is fine; no dizziness, no fainting, no depression." Medication: 3 Rauwidrine tablets on arising, 1 at 11:00 a.m., and again at 2:00 p.m.

July 5: "I begin to feel like myself. I don't think I'll need any more tablets. On July 11, I will have finished 4 months entirely free from alcohol" (First period of abstinence in fifteen years).

July 19: "I couldn't feel any better. I have a lot of leisure and pleasure. I am sleeping wonderfully; the headache is gone completely."

August 5: "I am feeling wonderfully, sleeping well."

CASE 3.—E.F., male, a 40-year-old, very intelligent white-collar worker, successfully treated for alcoholism at the Washingtonian Hospital 7 years previously, had never relapsed, but still suffered from extreme irritability and depression. In addition to psychotherapy, this patient had tried all of the

commonly used sedatives, without satisfactory results.

In December 1954, he was started on Rauwiloid, 2 mg. b.i.d. Within a short period, the patient commented: "Things that have bothered me in the past don't bother me that much."

February 4, 1955: Patient still complained of depression, and Rauwidrine was substituted for the morning Rauwiloid tablet.

February 7: "Depression has faded. New medicine has worked well, except for slight irritability."

March 15: "Feel O.K." Rauwidrine was continued as the daytime medication, and Rauwiloid was given at bedtime.

March 31, April 15 and April 29: Patient reported that treatment was "very satisfactory." He was continued on the same medication.

May 16: "The medicine [Rauwiloid] helps to reduce restlessness; is calming. It is the most effective medication."

May 27: "These [Rauwiloid and Rauwidrine] have helped me more than anything I took before."

Discussion

Most of the cases in our series would present reports similar to those described above, if given in detail, and clearly demonstrate the value of Rauwiloid (or Rauwidrine) therapy in the treatment of alcoholism. In 40 of the 50 patients treated with Rauwiloid some improvement was noted; of these, 29 showed moderate to marked improvement. These results compare favorably with those obtained in the comparable series of patients on B or on C, and are significantly superior to those seen in the control group on placebos.

The most favorable action of these relaxant drugs is their ability to dissipate anxiety symptoms without any toxicity or habituation. In this respect Rauwiloid (or Rauwidrine) has proven most satisfactory. It should be noted, moreover, that despite the fact that approximately 80% of our patients show a low blood pressure (in the range of 100/70), we did not hesitate to use Rauwiloid. Although this drug lowers an abnormally elevated blood pressure, we saw no evidence that it significantly affected the low pressures commonly seen in alcoholics.

We should also like to point out that therapy with each of the drugs tested in this study has been supplemented by case work and psychotherapy.

Summary and Conclusions

1. In a double-blind study with 2 mephenesin-like drugs, B and C, and placebos used as controls, Rauwiloid and Rauwidrine therapy proved effective for the psychogenic factors of chronic alcoholism.

2. Rauwiloid was most useful in relieving the symptoms of anxiety, nervousness and tension; supplementary therapy with Rauwidrine was usually effective when depression was a problem.

3. Sedation with Rauwiloid and Rauwidrine is notably free of toxic effects or habituation, offering a decided advantage over the use of barbiturates, bromides or other habit-forming drugs.

4. The use of Rauwiloid and Rauwidrine for the treatment of alcoholism, or other chronic states in which psychosomatic factors are prominent, merits further investigation.

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A CLINICAL EVALUATION OF MEPROBAMATE THERAPY IN A CHRONIC SCHIZOPHRENIC POPULATION[1]

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Reports of the salutary effects of meprobamate (2-methyl-2n-propyl-1, 3-propanediol dicarbamate) in the treatment of many psychoneurotic reactions (especially the anxiety and tension states) appear frequently in the recent literature(2, 5, 7). However, there have, as yet, been no published reports of any controlled studies relating to the value of meprobamate in a hospitalized psychotic population. Borrus and Selling(2, 7) describe a beneficial effect in 6 of 13 ambulatory patients diagnosed as schizophrenics. Pennington(1), at the Mississippi State Hospital, in a study of 1,250 patients, most of whom were schizophrenics, compares the effectiveness of meprobamate, reserpine, chlorpromazine, azacyclonol, pipradol hydrochloride, and whole root Rauwolfia. The results obtained with meprobamate are considered similar to those obtained with chlorpromazine and reserpine. About 3% of the patients were completely rehabilitated and a moderate or marked improvement was reported in 79%.

It has been demonstrated by Sabshin and Ramot(6) at the Michael Reese Hospital in Chicago that even the most rigorous experimental designs (including blind and double blind studies) do not entirely control special factors when a pharmacotherapeutic evaluation is made in a psychiatric setting. Keeping their critique in mind, we felt that a relatively long-term blind study of a homogeneous patient group, using several carefully obtained measures, would result in a valid estimate of a drug's efficacy.

Because of the wide range of signs and symptoms in schizophrenia, it was considered advisable to concentrate on one aspect of the process—the anxiety and tension seen in certain patients—and to evaluate the influence of meprobamate in that area. Our concept of anxiety is that of a subjective phenomenon experienced as a feeling of uneasiness or apprehension, frequently accompanied by the appearance of autonomic disturbances (*i.e.*, moist palms, urinary frequency, palpitations, etc.) and sleep disturbances. Tension is described as a feeling of muscular tightness and can be clinically recognized by postural rigidity and hypermotility.

PROCEDURE

Sixty-three chronic schizophrenic male patients at the Franklin Delano Roosevelt Veterans Administration Hospital were followed through the course of the study. Each patient had been ill for at least 18 months. They were selected upon the recommendation of their ward psychiatrists and by the authors after a preliminary psychiatric examination. The criterion for selection was overt manifestation of anxiety and/or tension. The subjects were roughly divided in half and randomly assigned to a drug or placebo group. Individual bottles identified only by the patient's name were prepared by the pharmacist. The placebo was identical to the drug in appearance. The placebo contained sucrose (5.18 gm.), corn starch (3.81 gm.), and calcium stearate (0.14 gm.). None of the personnel evaluating the subjects knew which patients were receiving drug or placebo. The relevant characteristics of the 2 groups are presented in Table 1.

The experiment was conducted over 18 weeks consisting of a 2-week premedication observation period, a 12-week medication period (during which the subjects received the drug or placebo), and a 4-week post-medication observation period. During the entire course of the experiment the patients were given no other so-called tranquilizing drugs, electroshock, or insulin therapy. The patients' therapeutic milieu (consisting of an organized activity program, group therapy for 7 of the patients, and individual psychotherapy with the ward psychiatrist once or twice weekly in 3 cases) was otherwise not altered. Sedation was administered by the ward physician when considered necessary.

[1] The authors express their appreciation to Wyeth Laboratories, Philadelphia, Pa., who supplied the drug and placebo used in this study.

[2] From Franklin D. Roosevelt VA Hospital, Montrose, N. Y.

TABLE 1

CHARACTERISTICS OF DRUG AND PLACEBO GROUPS

	Drug group (N = 32)	Placebo group (N = 31)
Age (median)	33	34
Range	23-47	22-49
Yr. of 1st hosp'n (median)	1948	1947
Range	1941-55	1936-55
Diagnosis	**No. of patients**	**No. of patients**
Paranoid	14	14
Hebephrenic	7	7
Catatonic	5	3
Simple	1	2
Undifferentiated	5	5
Prior somatotherapies	**No. of patients**	**No. of patients**
IST	12	10
EST	22	25
Lobotomy	5	1
Reserpine	25	22
Chlorpromazine	17	13

Dosage.—Patients were started on 400 mg. q.i.d. orally. This dose was increased by 400 mg. q.i.d. increments every 2 weeks in all cases not considered improved. An arbitrary upper limit of 1,200 mg. q.i.d. was set. The dosage was not increased in any case after the sixth week. By that time all but 8 patients in both groups were receiving maximum dosage. The medication was abruptly withdrawn exactly 12 weeks after it was started.

During the course of the experiment the patients were evaluated by means of: (1) psychiatric interviews and ratings conducted by the senior author; (2) conferences with the ward personnel and the ward psychiatrist; (3) a psychological questionnaire. EEG tracings, blood pressure, and weight records were also obtained.

Psychiatric interviews.—Subjects were interviewed during the premedication observation period and at 4-week intervals thereafter. During the psychiatric evaluation, the interview was structured to the extent that certain questions were asked of every patient and specific objective phenomena were recorded in each case. The recorded findings were subdivided into the following 3 categories: (1) observable (*i.e.*, objective) signs of anxiety and tension; for example, hypermotility; (2) subjective reports of anxiety; typical areas included expressed fears, apprehensions, disturbing impulses or thoughts, guilt, and fearful hallucinations; (3) subjective reports of physical symptoms related to anxiety. These included complaints of palpitations, light-headedness, excessive sweating and fatigue, as well as preoccupations with health and functioning of bodily organs.

Ward Conferences.—Weekly conferences were conducted with the nurses and nursing assistants (psychiatric aides), during which each patient was discussed in detail. Patients were rated for the extent of disturbed ward behavior (by asking specific questions about irritability, hypermotility, and emotional lability). A separate evaluation of estimated changes in anxiety and tension levels was also obtained.

Psychological Questionnaire.—A personality inventory containing 74 "anxiety" items was administered during the preliminary observation period, repeated during the final week of medication, and again at the conclusion of the experiment.

In addition to these measures, the ward psychiatrist was asked to make a general rating of the changes, if any, in anxiety and tension levels of each patient at the end of the 12-week medication period.

The only physiological measurements taken were twice-weekly blood pressure readings and weekly weight records. Attempts to collect data about sleeping patterns failed because of inaccurate reports. Observations of side-effects (notably drowsiness) were made by the ward personnel and reported in the weekly conferences.

The sole laboratory record obtained was a series of 3 EEG's on each patient, taken in the preliminary observation period, during the last week of medication, and at the end of the postmedication observation period.

RESULTS

Anxiety and Tension.—At the end of the experiment the patients were rated in terms of degree of change in their levels of anxiety and tension, being categorized as worse, unchanged, mildly improved, moderately improved, or markedly improved. In making this evaluation, we employed all of the collected data. Significant improvement ("moderate" or "marked") was considered to be improvement of such a magnitude that patients

previously exhibiting many of the signs and symptoms of anxiety and tension manifested clear reduction or disappearance of such phenomena. The clinical anxiety and tension rating scale used was derived from Fleetwood(3). Slight improvement referred to relatively minor changes which, for the most part, could be detected only by persons in continued contact with the patient (*i.e.*, ward personnel).

The final evaluation at the end of the 12-week medication period revealed a significant improvement (*i.e.*, "moderate" or "marked") in 13 patients of the drug group (41%) as compared with 3 in the placebo group (10%). A chi-square test shows that this difference is statistically significant at the 1% level of confidence. A repeat evaluation 4 weeks after the cessation of medication revealed a considerable reduction in the degree and number of patients maintaining improvement. Three patients in the drug group and one in the placebo group continued significantly improved. The over-all results are presented in Table 2. No significant correlations were demonstrated between improvement shown and age, duration of illness, or the extent of previous drug therapy.

A breakdown of the data obtained in the psychiatric interview is presented in Table 3. Inspection of the results reveals that 4 weeks after the start of medication, reduction in signs and symptoms occurred in large percentages of both drug and placebo groups. However, the drug group shows increasing improvement up to the end of the medication period; whereas, the placebo group shows erratic changes. The greatest differences between the groups occur at the end of the medication period. In the number of patients showing reduced objective signs of anxiety and/or tension, this difference attains statistical significance.

An analysis of the material obtained from the ward personnel is presented in Table 3. Examination of these findings shows that in approximately 50-60% of the patients there

TABLE 2

DEGREE OF IMPROVEMENT AND NUMBER OF PATIENTS IN EACH CATEGORY *

	After 12 weeks		4 weeks after withdrawal	
Rating	Drug	Placebo	Drug	Placebo
Marked improvement ...	5	2	0	0
Moderate improvement ..	8	1	3	1
Mild improvement	8	6	12	3
No change	9	20	14	24
Worse	2	2	3	3
Total	32	31	32	31

* Chi square tests of differences between groups are significant at 1% level.

TABLE 3

PERCENTAGE OF PATIENTS SHOWING REDUCED ANXIETY AND TENSION ON PSYCHIATRIC AND NURSING PERSONNEL RATINGS

		Number of weeks on medication			
		4 wks.	8 wks.	12 wks.	4 wks. postmedication
		Percentage			
Psychiatrist's rating					
Observable anxiety	Drug	56	66	72*	53
	Placebo	52	58	42	55
Subjective report of psychological symptoms	Drug	48	59	69	76
	Placebo	57	54	57	57
Subjective report of physical symptoms	Drug	29	46	68	68
	Placebo	43	43	46	43
Nursing personnel rating					
Disturbed ward behavior	Drug	53	50	62	53
	Placebo	61	61	61	48
Anxiety and tension	Drug	62	59	66*	56*
	Placebo	39	45	29	19

* Chi square test of differences between groups are significant at or beyond 2% level.

was a decrease in disturbed ward behavior throughout the course of the experiment without appreciable differences between the 2 groups. However, the number estimated as improved in relation specifically to anxiety and tension was greater in the drug group, as compared with the placebo group, from the start. This difference reached its greatest magnitude at the end of the medication period when 66% of the drug group was rated by the ward personnel as showing slight to marked improvement as compared with 29% of the placebo group.

Only 18 patients in the drug group and 20 in the placebo group were able to complete the psychological questionnaire on the 3 occasions it was administered. The remaining patients were unable to respond adequately to the questionnaire, chiefly because of poor contact with reality. Results of the tested patients showed that there was a greater reduction in the mean number of items indicative of anxiety among the drug group when examined at the end of the medication period. An analysis of variance technique, however, reveals that the difference does not attain statistical significance. The mean scores obtained are presented in Table 4.

Physiological Changes.—The physiological measures (blood pressure and weight) remained relatively constant throughout the experiment.

EEG Findings[3].—The results of the EEG's are summarized in Table 5. The outstanding electroencephalographic feature of those patients receiving the meprobamate was the presence of fast activity, most predominant in the frontal areas, in 56% of the cases. This has not been previously reported in the literature. The type of fast activity is much like that seen after barbiturates but in these cases is somewhat slower and a little more irregular. The fast activity seen in the 2 placebo group patients was, in one case, present both before and after, as well as during placebo administration. In the other case, the fast activity was probably due to the administration of sedatives after the cessation of placebo.

There are other findings in the placebo group, however, which are not so easily explained. Both groups showed about a 40% increase in alpha activity. With the placebo patients, the changes for the most part occurred at the time of placebo administration. With the drug patients, however, the changes in alpha occurred after the cessation of meprobamate. Several more subjects showed a decrease in the voltage with the placebo rather than with the drug. The correlations between improvement and EEG changes do not approach statistical significance.

Side-effects.—Eight of the patients taking the drug (in contrast to only 1 on placebo) complained of temporary "stomach upsets" at various times during the medication period. One of these had a previously diagnosed peptic ulcer. In no case was the symptom of such a magnitude that specific therapy was required.

Drowsiness was noted at some time in the first several weeks in 10 patients of the drug

TABLE 4

MEAN SCORES ON PSYCHOLOGICAL QUESTIONNAIRE *

	Preliminary period	12th wk. on medication	4 wks. postmedication
Drug (N = 18)	34.3	28.5	29.8
Placebo (N = 20) ..	37.6	34.5	32.6

* Differential changes between groups from test to test are not statistically significant.

[3] Mr. Lewis Brown, EEG technician at the Franklin D. Roosevelt VA Hospital, obtained the 174 EEG tracings used in the study. Albert N. Browne-Mayers, M. D., of the Cornell University Medical College department of psychiatry, evaluated and interpreted the EEG findings.

TABLE 5

NUMBER OF PATIENTS SHOWING EEG CHANGES

Type of change and period	Drug (N = 32)	Placebo (N = 26)
Fast activity		
Final week on medication.	18 (56%)	2 (8%)
Increased alpha activity		
Final week on medication only	1	5
Postmedication period only.	10	2
Both final and postmedication EEG's	1	4
Total	12 (37%)	11 (42%)
Depressed voltage		
Final week on medication.	1	3
Postmedication period	0	1
Both final and postmedication EEG's	1	2
Total	2 (6%)	6 (23%)

group and in 8 of the placebo group. After the second month of the medication period, it was observed in a minimal number of patients (3 in the drug and 4 in the placebo group). At no point was there a significant difference between the number of patients in each group reported drowsy.

Two of the patients on the drug experienced solitary grand mal seizures within 36 hours after withdrawal of the medication. One of these had had no previous history of convulsions. The other had a history of a single, unobserved "fainting spell," which occurred 1 month prior to the experiment. EEG's of both patients taken within 2 hours of their convulsions were reported as within normal limits. Both patients had shown the specific increased fast activity in the EEG taken while they were receiving meprobamate. There was no recurrence of seizures.

Another striking consequence of the abrupt withdrawal of medication was a temporary sharp increase in anxiety and tension in 16 of the patients receiving the drug and in 3 receiving placebo. Of great interest is the fact that the 3 placebo group patients who became worse after the placebo was withdrawn were the same 3 patients rated as significantly improved during the medication period.

No other side-effects were reported.

Discussion

The results obtained from this blind experiment indicate that meprobamate is effective in reducing the anxiety and tension accompanying certain schizophrenic processes. The patients receiving meprobamate continued to improve up to the time of withdrawal, suggesting that it may be desirable to continue the medication beyond a 12-week period. The disturbances following withdrawal point to the need for gradual termination of therapy. The salutary effect is apparently not related to age, diagnostic subdivision, or extent of previous drug therapy.

One result not demonstrated in the overall findings, however, was that patients receiving meprobamate on the most acutely disturbed wards showed considerably less improvement. It is of interest to note that on these wards the aides discovered large amounts of discarded medication. (On one ward, where 5 of 6 patients were receiving the drug, nearly 200 pills were found behind the radiator enclosures.) It is conceivable that the beneficial effects might have been even greater had all the medication been taken as planned. In this context, perhaps pharmacotherapy experiments with grossly psychotic patients in hospital settings should utilize drugs that can be administered in an elixir or parenteral form.

Another striking effect was the large number of patients showing apparent improvement initially, regardless of the actual medication received. This is postulated as being due to various factors; in part, the psychological effect on the patient of receiving medication and special attention (even though only 10 patients in the preliminary examinations expressed a need for any type of therapy). A second factor was the enthusiasm of the hospital personnel evaluating the patients (*i.e.*, changes were anticipated and probably readily reported). However, this "placebo effect" was not maintained throughout the medication period, in sharp contrast with the drug effect. Perhaps future studies could control this "placebo effect" by giving placebo initially to both groups, switching to the drug in one group after several weeks, at a time determined by a person not otherwise involved in the experiment. Such a method would appear to be more efficient than the standard double blind study.

A criticism of blind studies by Sabshin and Ramot(6) centered about the use of inert placebos. In this study no striking side-effects or physiological changes occurred to distinguish between the two groups. In examining the nurses' notes after the experiment ended, it was found that only 5 patients had received sedatives more than 3 times during the medication period. Of these, 2 were in the placebo group. Again, it is of interest that these patients were among the 3 in that group rated as significantly improved. Of the 3 patients in the drug group who received relatively frequent sedation, 2 did not require any sedation after the first 4 weeks of drug administration.

The results of the EEG studies indicate that meprobamate is a drug which draws specific neurophysiologic changes similar, but

not identical, to changes in EEG's obtained from patients receiving barbiturates. In addition, the neurophysiologic potency of the placebo over a prolonged period is suggested by its influence on the EEG (as increased alpha activity).

The 2 convulsions which occurred after the abrupt withdrawal of meprobamate may be viewed as similar to the so-called abstinence syndrome, described by Fraser and his associates(4), developing after the abrupt withdrawal of barbiturates. This syndrome, as described, includes occasional convulsions of a grand mal type and great anxiety.

Conclusions

1. Meprobamate is clearly of value in reducing the anxiety and tension level of chronic schizophrenic patients. Forty-one percent of a group of 32 patients receiving the drug for 12 weeks (up to 1,200 mg. q.i.d.) showed a significant improvement in comparison with 10% in a group of 31 patients receiving placebo. Improvement in the drug group continued to increase until withdrawal suggesting that a treatment period of longer duration is advisable. The effect was considerably reduced within 4 weeks after cessation of treatment.

2. During the medication period 8 patients complained of transient stomach upsets. No patients, however, required specific therapy. No other side-effects were noted during the time the patients received the drug. Upon abrupt withdrawal, solitary grand mal seizures occurred in 2 patients, as well as other less serious signs of increased anxiety and tension in other patients, indicating the need for gradual withdrawal.

3. The beneficial effects of meprobamate are unrelated to age, duration of illness, or diagnostic subdivision.

4. The improvement shown initially by the placebo group underscores the need for carefully controlled studies in evaluating therapy.

5. Meprobamate causes specific fast activity changes on a majority of EEG's. The increased alpha activity seen on the EEG's of patients receiving placebo as well as those receiving meprobamate demonstrates apparent evidence of placebo potency on a neurophysiologic level.

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SEIZURES AND THE MENSTRUAL CYCLE[1]

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The idea that there is a relationship between the seizures of epileptic women and some aspect of their sexual lives is at least as old as Hippocrates who said that "cessation of the menstrual flux is the cause of seizures"(1). It is also a current concept as evidenced by Lennox's interesting chronicle in the *Epilepsia* (1955), entitled, "The Reign of the Uterus"(2), which emphasizes the confused relatedness of seizures, female sexuality, and hysteria or psychological disturbances. It will be possible for us to mention only a small part of the vast literature on this subject.

Menstruation in particular has been singled out by many authors since Hippocrates. Medieval and post-medieval writers held that good menses would prevent epilepsy. A very common belief is that seizures occur more frequently in relationship to menstruation. In 1857 Locock(3) said "seizures are often related to hysteria or the menses." In 1904 Spratling(4) reported that a quarter of his patients had more seizures during menstruation. Turner(5), in 1907, said "the relationship of epileptic fits to menstruation is well established. In the majority of female epileptics, the seizures are observed to occur immediately before, or shortly after the monthly period, or if the fit incidence is more frequent an augmentation in their number or severity is noticed at these times." Church and Peterson(6) in 1914, and Healey (7) in 1928 report much the same. Lennox and Cobb(8) in 1928 speak of "the well known fact that many female patients frequently have seizures near the time of their menstrual periods." In his classical textbook of neurology, Kinnier Wilson(9) speaks of "menstrual epilepsy" and says, "in the majority fits take place just before the monthly period or during its course, being rarer after its end." Penfield and Jasper(10) in 1954 state, "epileptic seizures in females often begin at the time of their menarche and some relationship to the menstrual cycle is a common observation, hence the term "menstrual epilepsy" has been used to describe some cases. Attacks are more likely just before the menses rather than during or afterwards."

In 1949 Bridge(11) states, concerning menstruation, that "women with epilepsy may be entirely free from seizures except during this time. In such instances the clear relationship between epilepsy and the menses points to an effect of the endocrine glands . . . indirectly through edema of the menstrual period." Thus Bridge gives the female sex glands and hydration etiologic significance, although he did not make a study of it.

In this literature relating seizures to menstruation it is striking how often this relatedness is a clinical impression rather than a statistical conclusion. Even so, there is a difference of opinion as to whether seizures relate to the time of menstrual flow itself, to the time before, or to the time after. In other words, it is not clear to which *phase* of the menstrual cycle seizures are related. In this paper we present evidence about this relationship.

Two previous statistical analyses of the relationship between seizures and menstruation were done by Dickerson(12) in Michigan, and Rios and d'Alembert(13) in Brazil. Dickerson found that 10% of 269 patients showed more seizures or had seizures only during menstrual bleeding. However, since menstrual flow was the only physiological phase of the cycle he defined, he could not say much about the seizure-phase relationship in the vast majority of his cases. Nor did he offer any explanation of the 10% who had "menstrual epilepsy." Rios and d'Alembert found in 104 patients that "the influence

[1] Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

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of menstruation on seizure incidence is small," but their statistical treatment is unsatisfactory. Their division of the menstrual cycle was into 4 phases—menstruation, the week before, the week after, and the remainder of the time. They indicated only whether seizures were present or absent in each phase, without giving any quantitative information about the incidence. Since their division of the menstrual cycle is arbitrary rather than physiological, and since they did not quantitate the seizures, no real correlations are possible.

The literature thus shows that although there is wide acceptance of the belief that there is a relationship between seizures and menstruation there is no reliable statistical information about the incidence of seizures in the different phases of the menstrual cycle. Yet "menstrual epilepsy" is considered to be a specific syndrome, to account for which various physiological explanations have been offered involving the endocrines and hydration. There have, however, been no studies undertaken to test these hypotheses. We wonder if the incidence of menstrual epilepsy is any greater than that of proliferative epilepsy, ovulatory epilepsy, progestative epilepsy, or premenstrual epilepsy.

Some authors, such as Spratling(4) and Partridge(14), believe that there is a relation between seizures and irregularities in the menstrual cycle. They state further that the menstrual cycles of epileptic women are often irregular. However, these authors did not adequately define the menstrual cycle.

There have been no studies of the menstrual cycle of epileptic women which offer data about the normality of the cycle with respect to length and ovulation. Thus there is no knowledge whether epileptic women as a group ovulate or not.

Because of this paucity of information about epileptic women, namely, (1) whether or not they have normal ovulatory menstrual cycles; and (2) whether or not they have an increased incidence of seizures during any physiological phase of the menstrual cycle, and if so, which phase; and also (3) because of the confused relatedness between epilepsy, female sexuality, and hysteria to which Lennox still points, we undertook a study of such women. Our hypothesis was that sexuality in the broadest sense (eroticism, menstruation, pregnancy, and motherhood) plays an important etiological role in the occurrence of seizures in epileptic women between the menarche and the menopause.

With the aid of the Institute of Mental Health, U.S.P.H.S., we carried out for 3 years a combined psychiatric and physiological study of over 30 epileptic women in the age range between menarche and menopause. Our patients were selected without regard to the type of epilepsy, whether idiopathic or acquired. The diagnosis of epilepsy was clear and the EEG was abnormal in each case. The patients had to be of at least average intelligence and free of significant psychosis, alcoholism, or psychopathy.

Our study consisted of: (1) weekly psychiatric interviews extending from 100 to over 300 visits; (2) psychological tests, including the Rorschach and Thematic Apperception, which were done at intervals during the study; (3) the definition of each menstrual cycle by daily vaginal smears (using the Shorr technique) and basal temperatures into 5 phases, namely, ovulation, progestation, premenstruation, menstruation, and proliferation; (4) frequent EEG's at the various phases of the cycle; (5) determination of hydration throughout each cycle by daily basal weights; and (6) accurate temporal charting of all seizures.

The various interviews and tests were done independently by a psychiatrist, a gynecologist, an epileptologist, and a clinical psychologist. There were also 2 groups of controls without psychiatric interviews, namely, 10 nonepileptic and 8 epileptic women. In all epileptic subjects the frequency of seizures and the amount of antiepileptic medication were stabilized before the study started.

Our first finding presented has to do with the normality of the menstrual cycles of our epileptic patients, entirely aside from the matter of seizures. There were 29 patients whose menstrual cycle data were reliable, based on 6 to 39 cycles. The mean length of cycle based on individual averages was 30.1 days. In a study of 20,000 calendar records from 1,500 women Arey(15) found the mean length of cycle to be 29.5 days. This is not a significant difference. All of the 29

epileptics ovulated—23 during every cycle studied, and the remaining 6 in at least half the cycles. Of the 6 who did not ovulate every cycle, 2 were adolescents and one was becoming menopausal. According to gynecologic sources, such as Novak(16), menstruation is normal if ovulation re-asserts itself, even after anovulatory cycles. Thus it is clear that these epileptic women have normal ovulatory menstrual cycles.

With respect to the relationship of seizures to menstruation we have first the testimony of 30 epileptic patients in response to 3 questions (Table 1). Almost 57% said that there is a relationship between seizures and menstruation; but only 20% relate the first seizure or the recurrence of seizures to menstruation; and only 13% relate seizures to the first period.

The definition of each menstrual cycle into 5 phases, and the temporal charting of all seizures, enables us to determine the relationship between menstrual phases and seizures in 22 epileptics. The remainder of our subjects were dropped from this analysis for the following reasons: (1) An insufficient number of seizures defined as fewer than 5; and (2) insufficient data about the menstrual cycles.

First, for each woman we can examine the relationship between phases and seizures by applying the chi square method to a comparison of the percent time represented by each phase and the percentage of all seizures occurring in that phase. This, of course, would tell us which, if any, phase is statistically preferred. For example (Table 2), Subject A had 646 seizures which were distributed among the phases as follows—6% during ovulation, 35% during progestation, 8% during premenstruation, 16% during menstruation, and 35% during proliferation. These phases represent 7%, 36%, 7%, 16%, and 34% of the time of observation, respectively. By the chi square method there is no phase preference. In Subject B, on the other hand, chi square assumed significance, and when each phase was examined by the "t" test, a preference for menstruation was found.

TABLE 1

	Yes	No
Are seizures related to menstruation?	17 (56.7%)	13 (43.3%)
Was the first seizure, or the recurrence of seizures, related to menstruation?	6 (20%)	24 (80%)
Was the first period related to seizures?	4 (13.3%)	26 (86.7%)

TABLE 2

	Ovulation	Progestation	Premenstruation	Menstruation	Proliferation	Total
Subject A						
Days	8	41	8	18	39	114
Seizures	36	224	51	100	235	646
Per cent seizures	6	35	8	16	35	100
Per cent days	7	36	7	16	34	100
Subject B						
Days	44	193	46	116	245	634
Seizures	20	151	34	172	220	597
Per cent seizures	3	25	6	32	34	100
Per cent days	7	30	7	18	38	100

By this study of each individual (Table 3) it was found that of the 22 subjects, 6 showed no phase preference; 5 preferred menstruation, 4 each, proliferation and progestation; and ovulation and premenstruation were each preferred by 2.

To examine the preference by the whole group of 22 epileptics for each of the 5 phases we had to compare the medians, percent days, and percent seizures, since the number of days and number of seizures differed so greatly among the individual subjects. Table 4 shows that by the chi square method the incidence of seizures falls within the normal distribution for the phases of the menstrual cycle. There is *no* significant increase of seizures during any phase. Seizures occur at random throughout the menstrual cycle.

The individual phase preferences shown by 16 of the 22 epileptic women are themselves part of the random distribution for the whole group. This might serve to ex-

TABLE 3

Individual phase preference	Number of subjects
Ovulation	2*
Progestation	4
Premenstruation	2*
Menstruation	5
Proliferation	4
None	6

* 1 subject showed preference for these 2 phases.

TABLE 4

Twenty-two subjects

	Ovulation	Progestation	Premenstruation	Menstruation	Proliferation
Median per cent days	7.5	32.0	7.5	17.5	33.5
Median per cent seizures	6.5	27.0	6.5	17.5	26.5
X^2	2.9	.7	0.0	.7	.7
p	.20	.50	.90	.50	.50

plain the previous statements by various authors assigning an increased frequency of seizures to a given phase of the menstrual cycle. Especially does it explain the differences of opinion among these authors as to which phase is preferred, whether menstruation or the other phases of the cycle.

However, this statistical analysis does not explain the general tendency to relate seizures in some way to the menstrual cycle, and certainly it does not explain why a majority of the very women in whom this random distribution is found themselves relate seizures to menstruation. The answer to this, we believe, lies in the psychological significance of menstruation. We cannot in this paper supply corroboration of our psychological hypothesis. We have done this to some extent in 4 previous papers, one before this Association in 1953. All we can say now is that at times an epileptic woman may suddenly show a phase preference, which occurs for only one or several cycles and then stops. Later she may show a different phase preference, again for a limited time. We have found that when this occurs it appears to be most closely related to psychological factors. Specifically, what is dynamically significant is the meaning to the patient, at that time, of that particular phase of the cycle, *i.e.*, the fantasies and feelings about that phase.

For example, one patient with a strong unconscious wish for a child suddenly began having very many seizures at the time of ovulation. This occurred when the temperature rise of ovulation, about which the patient learned from taking her temperature daily, became associated in her mind with the heat of passion. At the same time ovulation itself became associated with the possibility of pregnancy. These fantasies became dynamically significant because her erotic feelings for her therapist and her desire for a child from him were being powerfully stimulated but also frustrated.

Another example is a spinster, the oldest of 7 children, with an intensely ambivalent relationship to her dead mother; she suddenly had 10 seizures during a menstrual period. The menstrual bleeding became associated in her mind with sado-masochistic fantasies of delivery when her father told her, just at the beginning of the period, of the pregnancy of a younger sister. This happened at a time when the patient's some-time lover was returning to his wife. At the same time the patient was beginning to have pregnancy fantasies in treatment. During several years of observation she had only one other seizure during menstruation.

We believe that in these transient phase preferences, it is clearly the psychological significance of the phase which is decisive.

Conclusions

On the basis of the findings presented, we derive the following conclusions:

1. Epileptic women have normal ovulatory menstrual cycles.

2. The seizures of epileptic women as a group have a random distribution with respect to the phases of the menstrual cycle.

3. Many individual epileptic women show an increased incidence of seizures during a particular phase of the menstrual cycle. This phase preference, however, by individual epileptics, *is spread among all the phases*, and is itself part of the random distribution for the group. Consequently, the concept of "menstrual epilepsy" may be due to this phase preference shown by some women; however, it would be equally valid or invalid to speak of "proliferative epilepsy," or "ovulatory epilepsy," or "progestative epilepsy," or "premenstrual epilepsy," since other women show statistical preference for these phases.

4. In some instances transient phase preferences clearly have been due to discernible psychological factors. It is possible that *all* the individual phase preferences within the random group distribution are largely determined by psychological factors. As yet we are not able to speak conclusively about this.

5. With respect to the confusion between epilepsy and hysteria, it seems possible that it is due to the importance of psychological factors in both disorders.

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DISCUSSION

THERESE BENEDEK, M.D. (Chicago, Ill.).—Prejudice and superstition die hard. It is a special merit of this investigation, presented so simply and clearly, that it takes up an old belief, which has survived generations of scientists as fact, namely, that female epileptics are apt to have more frequent and more severe seizures around the time of menstruation than otherwise. Investigating this assumption with the modern, multidisciplinary approach, and comparing the distribution of epileptic seizures in all phases of the cycle, the authors come to the conclusion that menstruation does not play any significant role in the activities of seizures. What is our response to this finding? My own is surprise, amost disbelief. I feel the impact of the prejudiced expectation. We are inclined to ask whether the sample of 30 women is sufficient. I do not doubt the validity of this result, but I want to underline our tendency to go along with old beliefs and our reluctance to accept corrections, although we spend time, effort and money to achieve them.

I personally have reason to be very gratified with the findings of this investigation, for it corroborates the conclusions drawn from my studies of the female sexual cycle. The latter revealed that parallel with each phase of the hormonal cycle one or the other specific tendency of the sexual drive motivates the emotional life of the woman. During the estrogen phase of the cycle it is the heterosexual tendency and related conflicts which dominate the behavior; during ovulation and the progestation phase conflicts related to pregnancy and motherhood are in the foreground; during the premenstrual-menstrual phase, when the hormone level is low and the ego tends to be regressive, the infantile conflicts and the fearful expectations connected with menstruation motivate the emotional life; anger and frustration, depression or overactivity describe the behavior during this phase in most general terms.

Probably the loss in controlling power of the ego and the resulting overt emotionalism explain our inclination to believe that the awe-inspiring fact of menstruation can cause, or in any event, activate another awe-inspiring phenomenon, the epileptic seizure. Yet Dr. Bandler and his associates found that seizures occur at random throughout the menstrual cycle; that fantasies and feelings related to the special phase of the cycle—*i.e.*, the meaning of that phase of the cycle to the patient in a given time—is dynamically significant for the activation of the seizure.

The psychodynamic significance of this finding is far-reaching. I want to emphasize only one aspect: it shows clearly the connection between "life situation—emotion and symptom." For example, a young girl afraid of becoming a woman and afraid of her heterosexual tendencies may have seizures in the premenstrual and the proliferative phase of the cycle. The same woman, years later, when her conflicts are concentrated around childbearing, might have seizures during the progestation phase of the cycle. The analysis of the psychologic material referable to the seizure reveals then the repressed developmental conflicts which motivate the current conflicts.

The findings presented here today are confirmed by another recent study on epilepsy by Epstein and Irving, who also came to the conclusion that the content and structure of psychomotor seizures can be interpreted in terms of repressed emotional content. This underlines again, as the authors indicate, the dangers of confusion between epileptic seizures and hysteria. At the same time, I believe that the present investigation not only warns us against such confusion but also outlines the steps of differentiation. The present investigation calls our attention to the fact that the psychologic content of the seizure is related to the hormonal cycle—*i.e.*, to a physiologic system other than the one which predisposes to seizures or is responsible for the epilepsy itself.

The sexual conflict creates an instinctual tension which may be experienced in various ways—as frustration and/or anger; as longing and/or depression—and thus creates intrapsychic tension which triggers the seizure. The psychologic content, however clearly demonstrated it may be, in dreams and fantasies or in life situations, however accessible it may be to interpretation, means only the psychologic "working-through" of an intrapsychic tension, and is not the cause of the disease.

Investigations, such as the present one, are the means by which we shall be able to differentiate the rank and order of the factors which enter into the motivation of seizures.

THE PSYCHOPHYSIOLOGY OF SCHIZOPHRENIA

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With the advent of the new alleviating drugs the pendulum seems to be swinging back toward a physical explanation of the schizophrenic process with a resulting conflict between the "functionalists" and the "organicists."

The organicists argue that physical changes occur but that their instruments are not exact enough to detect the histological changes. "Such disturbances evidently occur at a molecular level, too subtle to yield directly to present-day analysis by neuroanatomists and neurophysiologists"(21, p. 434). Landis goes a bit further in his discussion of lobotomy(36): he states that the relief of "anguish" by lobotomy occurs as a result of some agent carried in the blood sensitizing the cortical tissue, usually in the prefrontal area.

The functionalists state that there need be no anatomical change for a behavioral change to occur; that the organ functions perfectly but the operator (patient) is inefficient. This appears untenable since it requires independence of the mechanism from the operator and this situation does not exist in reality. However, it is possible that the dysfunction (behavioral) may be due to the establishment of inappropriate associations. A mechanical brain can function perfectly yet come up with the wrong answer simply because the wrong information was fed into the machine. The direction of its effort is wrong. So it may be with schizophrenics—the direction of their effort is wrong. They have learned an aberrant way to gain satisfaction and expend great quantities of effort to maintain these habits. One cannot say that a schizophrenic is not motivated; rather the direction of effort is inappropriate and a redirecting of this effort is the fundamental change to be sought in such a patient. "To the extent that behavior disorders are not determined by abnormal conditions in the brain, they must be conceived as consequences of learning" (51, p. 273).

This paper attempts to examine some of the evidence referring to the biological basis of a psychosis. It is based on the hypothesis that schizophrenia is a severe illness with definite biochemical changes which result from an attempt by the organism to adapt to a stress; that schizophrenia is a "disease of adaptation."

BEHAVIORAL EVIDENCE

Probably none of the evidence that follows can be construed as positive proof of a biochemical basis for schizophrenia. Rather it is a form of negative evidence; that is, it shows the failure of many behavioral studies to demonstrate a difference between "functional" and "organic" cases. The present tendency is to posit as the fundamental behavioral difference between these 2 nosological groups a loss in the abstract attitude or the ability to conceptualize and integrate. Many psychological tests now in general use depend on this idea that defects in abstract behavior are valid indicators of organic brain damage (12, 16, 52). However, it has been repeatedly shown that schizophrenics, neurotics, and normals also suffer from this loss(4, 11, 14, 16, 18, 24, 27, 29, 30, 39). It appears that the differentiation of organic from functional cases has little experimental basis. This is dealt with more completely in an excellent paper by Yates(53). The fundamental question that this incurs is: since in other groups it is also possible to demonstrate this "organic-like" behavior, can one logically infer that an aberrant physiological or neurological change, albeit reversible, has taken place?

In the Greystone studies on ability to abstract(30), the preoperative as well as the postoperative results showed no statistically significant differences between the control and operated groups on the tests used, which were those specified by Goldstein as a measure of abstractive ability. Another author(29, p. 182) commenting on this failure stated:

> The complicating factor in lobotomy is the fact that the patients are psychotic. This is not an insurmountable barrier, however, since it is quite possible to obtain psychometric records from such patients.

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Here the author rather casually dismisses the primary reason for the lobotomy, a psychosis. Since most psychoses usually show impaired abstracting ability, at least under non-stress conditions, is it proper to view the psychosis as a relatively unimportant factor when actually it may be the primary reason why no definite pre- or posttest differences in intellectual functioning are found? That is to say, no differences in pre- and postlobotomy testing were found because the disruption of the "abstract attitude" supposedly caused by the operation was already effective in the schizophrenic patient. It may be that the researchers were looking for a loss of an ability which was discarded when the psychosis developed and not when the operation occurred. This idea is supported by the fact that intellectual loss is shown by patients requiring a lobotomy for intractable pain (20).

Distortions shown on Halstead's category test (14) by organics are no greater than nor fundamentally different from those which characterize the performance of the mentally ill patients. Meadow and Funkstein (39) found that a relatively marked impairment in abstract thinking in schizophrenia is paralleled by a specfic type of autonomic reaction; the reaction being a marked response to epinephrine, low blood pressure, and failure of the blood pressure to rise under most stresses. They state that the similarity of the loss of abstract ability in these patients and in those with organic disease would suggest a defect in the cortex. Kendig and Richmond (28) found the performance of schizophrenics impaired, not only on "abstract tests," but in all tests requiring sustained attention and effort. These failures to demonstrate differences between organics and functional psychoses are the typical pattern (27, 34, 41, 52). More thorough reviews of the literature by Klebanoff (32) and by Yates (53) confirm this. Yates believes this failure is due to poor experimental design and lack of an adequate theory with which to guide research.

Deficit in conceptualization or abstracting ability appears to be a definite concomitant of psychological pathology but it does not appear to be dependent on the genesis of the illness. It makes little difference whether the pathology is somatogenic or psychogenic. The end result as shown by behavioral measures is the same. The tests do give a measure of pathology but do not permit any statement as to the source of the illness. The advent of a psychosis causes the same loss in conceptual ability as does trauma or infection of the cortex.

PHYSIOLOGICAL EVIDENCE

Studies relating to the physiological reactions of behavior deviants to stress give conflicting results. Hoagland (21) states that two-thirds of a group of schizophrenic patients are quantitatively subnormal in their adrenal stress responses and in their responses to injected ACTH in comparison with a group of normal subjects. All the schizophrenics showed qualitatively abnormal stress responses. Pincus and Hoagland (44, 45) used exposure to heat and cold, ingestion of large doses of sugar, pursuit rotor fatigue, and frustration tests. In normals these stresses enhance adrenocortical activity: the greater the stress the greater the adreno-cortical output. Schizophrenics showed a striking inability to respond to these tests with enhanced steroid output. The authors state that these results cannot be accounted for with the statement that the unresponsivity of the schizophrenic might be due to lack of interest and general detachment since some of the stresses were physiological.

On the other hand, Gildea (10) found that adrenal cortical function, when tested by physical stresses such as heat, epinephrine, or other means, appears to be normal. The only function in which their patients seemed to be defective was in capacity to react to "psychological stresses." Meadow and Funkenstein (39) state that the reactivity of the schizophrenics varies with severity of illness. They found 3 different levels of reactivity to pharmacological stress, with these levels not necessarily being related to the nosological category. Funkenstein *et al.* (8) found most of their psychiatric patients showed either exaggerated or weak responses to the drugs, epinephrine and mecholyl, often with deficient capacity to re-establish homeostasis, while the control group showed a moderate response to the drugs with early tendency to re-establish homeostasis.

The net result of the studies showing

physiological differences between schizophrenics and normals is that there is a definite biochemical change occurring in *many* cases of schizophrenia, not *all*. Whether this is cause or effect remains a moot question. We know that certain drugs such as lysergic acid and mescaline can cause the psychological symptoms of a psychosis to appear. I am unaware of any studies that have determined the physiological changes that might occur while the subject is under the influence of these drugs. There is definite evidence of a relationship between improvement and physiological and neurological changes(9). However, the existence of a correlation does not always denote a cause-effect relationship. It is probably as Hebb states ". . . neurosis or psychosis is a product neither of experience nor of constitution, but a joint product of both"(19, p. 259).

Another question that arises is why does this physiological change occur in only some of the schizophrenics? If schizophrenia is a biochemical illness should not the changes be universal? It is noteworthy that the new alleviating drugs, reserpine and chlorpromazine, are not equally effective with all types of patients. Nor does their effectiveness depend on the patient's nosological category. Recent studies by Cowden, *et al.*(5, 6, 7) show that these drugs are effective only with those patients who maintain a high level of anxiety which is manifested in gross behavioral deviations. That they are not effective with all patients is shown by other studies also(31, 37, 52). This differential effectiveness suggests that there are different types of schizophrenia based on physiological criteria.

Is the physiological disruption an over-all general systemic weakness such as failure to maintain homeostasis; or is there a specific organ which might be considered the center for such deviations? Many authorities believe that the center for the disruption of the biochemistry of schizophrenics is the hypothalamus. This would explain the effectiveness of certain new drugs. If anxiety has its basis in the hypothalamus and the autonomic nervous system, we might say anxiety is basically a *physiological* experience. The drugs are effective with those patients who still show a predominate adrenergic autonomic activity in response to stress. The patients who continue to be anxious and to be behavioral problems are those whose autonomic nervous systems continue to function in a more or less normal manner to maintain homeostasis. They could be characterized as being at what Selye(47) calls the stage of resistance. They have not yet reached the stage of physiological exhaustion found in some schizophrenics as reported by Pincus and Hoagland(44, 45). This would logically follow since the drug is supposed to operate through the diencephalon, primarily via the hypothalamus. The drug would act as a depressor of the hypothalamus which, according to Gellhorn(9), would be advantageous to agitated and anxious patients. The general importance of the hypothalamus in almost all realms of activity is well pointed out by Stellar(49). The rationale behind the lobotomy operation points again toward the importance of the hypothalamus in this disease.

Heath and his co-workers at the Tulane Medical School take exception to the stress placed on the hypothalamus and adrenal activity as the source of mental illnesses. They believe that the basic loss in schizophrenia is loss of ability to feel or experience a pleasurable state. The results of their research with implanted electrodes and deep subcortical stimulation point to the basal septal region as being the most influential. These studies are well described in the book *Studies in Schizophrenia*(17). Their work suffers, however, from a lack of certain basic experimental controls such as the use of control patients and normal subjects (understandable in light of their method); from a certain degree of inaccuracy in planting the electrodes; and from an inability to determine whether the stimulation is specific to the septal region or has a spreading diffuse effect. Further, it is an attempt to localize the cause of schizophrenia, which I believe is a nonspecific illness involving the total organism. This theory is supported by the evidence of psychotic symptoms being caused by diverse sources such as vitamin deficiency, fatigue, drugs, alcohol, psychological stresses, physical disease, and hereditary factors. Further, schizophrenia, interpreted in terms of present proven facts, cannot longer be considered a generic term that implies certain universal characteristics. Nor is the present nosological system adequate to describe

and explain the recently discovered differences in various patients or in the same patient at different times. The physiological evidence suggests that basic differences exist in schizophrenic patients and that these biochemical differences might be the most fruitful in determining diagnosis, type of treatment, and prognosis.

CONSTITUTIONAL FACTORS

Under this heading must be considered not only genetics, but such factors as body type, nutritional or vitamin deficiency, organic insult, and enzymatic action.

Kallman(26) has shown in his longitudinal studies of schizophrenia and family structure that the illness appears to have a direct correlation with heredity. Lennox(38) has done the same in studies on epilepsy. Further evidence of the relation between heredity and mental illness is found in studies dealing with Alzheimer's and Pick's disease, Huntington's chorea, and certain types of mental deficiency. Kallman takes great pains to point out that heredity is not the complete and sufficient cause of schizophrenia but that an organism with this genetic predisposition is more prone to lapse into a psychosis when placed under stress than is the usual person. If some schizophrenia is considered as basically a biochemical disruption it appears logical to accept a genetic factor. Genes might be considered as the basic catalytic agents of an organism and, therefore, important in determining the level of functioning of the homeostatic mechanisms.

Sheldon(48) has demonstrated a significant correlation between body type and personality. It has been argued(35) that the self-perception one attains is in large part influenced by society's attitude toward the individual. That this attitude can be influenced by physical size, stamina, and appearance is an empirical fact. So here again, as in the relationship between clinical improvement and physiological change, the existence of a correlation does not denote a cause-effect relationship. However, Kline and Tenney(33) found a significant positive correlation between good prognosis and mesomorphy as the dominant body type. Hoskins(23) declares the paranoid form most nearly retains psychosomatic normality. In this regard Alexander(1, p. 22) states;

> The superior physical endowment of the mesomorph from the point of view of strength and endurance certainly seems pertinent in relation to his relative resistiveness to schizophrenia.

Robins and Mensh(46) catalog the behavioral effects of a lack of specific nutritional factors and of an excess of certain drugs. They point out the importance of the vitamins acting as co-enzymes in carbohydrate metabolism; and that individuals vary greatly in their tolerance level for various drugs.

A CONCORDANCE

In the above discussion, in each category briefly reviewed, there exist contradictions that remain to be explained or unified under one theory. I attempt such a theory below:

The basis of this theory is Selye's General Adaptation Syndrome(47). He states that physiological changes accompany stress—both physical and psychological stress. We know that physical stress (disease, injury, etc.) is manifested by hyperpyrexia, increased white blood count, eosinophile change, etc. We also know that psychological stress manifests itself in the symptom of anxiety. As a result of this stress and the resultant anxiety the organism makes an attempt at adaptation. This adaptation, in the case of psychological stress, frequently takes the form of a neurosis or psychosis. This is true if we can arbitrarily define a neurosis as a symptom or syndrome used to allay anxiety. Neurosis is at once a defense against psychic anxiety and subsequently against the physical and biochemical changes that accompany it. At the same time a neurosis is a defense against psychosis. Neurosis does not preclude a psychosis but lies on a continuum with it.

Let us translate Selye's GAS theory into psychology: "The GAS is the sum of all nonspecific systemic reactions of the body which ensue upon long-continued exposure to stress." There are 3 stages: the alarm reaction, the stage of resistance, and the stage of exhaustion.

Stage 1.—"The alarm reaction is the sum of all nonspecific systemic phenomena elicited by sudden exposure to stimuli to which the organism is quantitatively or qualitatively

not adapted." Psychologically, this is to say that given a sudden psychological stress which is translated into, and which the organism interprets in terms of, physical discomfort the organism tends to respond in a manner similar to the "alarm reaction." We will call this anxiety. Just as the organism responds to physical insult with a general marshalling of forces such as increased adrenalin output, white blood count, increased eosinophiles, etc., so it responds to psychological stress with a marshalling of forces—anxiety. Accompanying this anxiety are physical changes that parallel those which occur during physical stress. At this stage one might place such clinical phenomena as panic, fainting, paralyzing fear, and others. These reactions cannot be characterized as being neurotic or psychotic but are rather universal reactions to sudden nonpersistent psychological stresses.

Stage 2.—"The stage of resistance represents the sum of all nonspecific systemic reactions elicited by prolonged exposure to stimuli to which the organism has acquired adaptation as a result of continuous exposure. It is characterized by an increased resistance to the particular agent to which the body is exposed and a decreased resistance to other types of stress. Adaptation to one stress is acquired at the expense of resistance to other stresses." Most biochemical changes of stage 1 disappear during this stage. Here the sympathetic autonomic system increases its function to alleviate the shock reaction of step one. Psychologically, so too does the organism respond to acute anxiety with actions that alleviate the anxiety. If the stress is a persistent or prolonged one then there is the seed for a neurosis or psychosis. These stress-relieving actions are called, in psychiatric terms, defenses. If these psychological defenses work then the extreme burden placed on the autonomic nervous system is relieved and it functions relatively normally. Note the Pincus study (43) which showed that "the "neurotic's biochemical responses to stress have been found to be essentially like those of the normals, whereas those of the schizophrenic are consistently different in certain details."

This stage is usually a defense against the specific stress operative at the time, although the reaction itself is a nonspecific systemic reaction. It leaves the organism unprotected against an additional or different stress. In the case of psychological stress when the incumbent neurotic defenses are no longer sufficient the organism lapses into a psychosis. For example, the neurotic person under conditions of severe combat stress is much more likely to become psychotic than a realtively stable individual. If the stress persists beyond this and cannot be relieved by the psychotic defenses, this stage of resistance eventually breaks down and the stage of exhaustion occurs. The physical changes are increased because of the failure of the psychological defenses to alleviate the anxiety. These physical changes take the form of biochemical disruptions and are manifested in the functioning of the cerebral cortex. The rate at which this breakdown occurs probably depends on certain constitutional factors. Selye has a term for this, "adaptation energy," which he defines as the ability of the organism to acquire resistance to stress.

Stage 3.—"The stage of exhaustion is the sum of all nonspecific systemic reactions which ultimately develop as the result of very prolonged exposure to stimuli to which adaptation had been developed, but could no longer be maintained." Psychologically, we find here those patients who are apathetic, withdrawn, "burned-out" schizophrenics that show little or no affective response. They no longer manifest any anxiety because they are physiologically exhausted and anxiety is basically a physiological phenomenon. Here might lie the reason for the difference in physiological responsivity found by Pincus and Hoagland as against the results of Gildea. Gildea may have been using patients who were functioning at stage 2 while Pincus used primarily stage 3 patients. Recent work by Funkenstein, *et al.*(8) and Alexander(1) show these basically different types of schizophrenia which are not correlated with diagnostic category. Meadow and Funkenstein (39) found such a remarkable behavioral difference correlated with physiological response that they posited a form of cortical insufficiency in one group. Cowden, *et al.*(5, 6, 7) have shown the relative specificity of the effectiveness of the new tranquilizing drugs and suggest that there are different types of pa-

tients based on a physiological or biochemical criteria rather than the present symptomatic nosology.

On this basis it is possible to say that a prolonged psychological stress can cause definite physiological change and that this physiological change, when it occurs, must be remedied before psychological treatment can be effective. There appears to be definite evidence that some schizophrenia is a purely biochemical disease(2) but that most cases are of a psychogenic etiology and that the physiological changes follow.

But how does this biochemical change take effect? Let us look at Hebb's theory(19) dealing with cell assemblies and phase sequence in the cortex. In the process of growth, phase sequences are established while at the same time the brain remains a relatively flexible instrument in that it can continue unceasingly (limited only by constitution) to incorporate new stimuli and learning experiences. With the advent of stress a biochemical change occurs, which if prolonged, affects the flexible firing of these sequences. The brain becomes more rigid in its pattern (hypersynchrony). It cannot adjust to new stimuli or situations and as a result inappropriate behavioral responses occur. These inappropriate responses are due to misfiring of the central nervous system. By inappropriate responses are meant hallucinations, neologisms, word salad, etc. Some workers say that this activity is all symbolic and must, therefore, be controlled. There is no evidence to support this beyond the worker's own interpretation. There is evidence (Penfield) to show that the hallucinations and other psychotic phenomena are a result of misfiring.

Pincus and Hoagland(44, 45) found that one of the most conspicuous indices of failure in schizophrenics is in the adrenal regulators of salt balance or potassium at the time of stress. When potassium is low, the excitability and spontaneous discharge characteristic of normal nerve fibers is not observed (40). Thus faulty potassium metabolism under stress may be a cumulative factor in a developing psychosis. Selye feels that adaptation to stress depends on a defensive hyperactivity of the adrenal cortex and that it terminates (stage of exhaustion) in a final breakdown reminiscent of cortical insufficiency as a result of prolonged exposure to stimuli to which adaptation has been made, but could not be maintained. A stress might result in lowered potassium level and the resultant decrease in cortical activity or hypersynchrony. EEG studies, according to Hebb(18), show an inverse relation between integrated mental function and hypersynchrony. Hebb's theory is based primarily on brain-damaged individuals. In such patients this hypersynchrony is due to trauma or infection and this damaged tissue acts as a pacemaker for neighboring cortical tissue. The prolonged psychological stress which causes schizophrenia results in among other things metabolic disturbances such as faulty potassium metabolism. I do not think this deficiency alone is enough to explain the illness; it is here used for descriptive purposes. As previously stated, potassium determines the reactivity of neural tissue and a lack of this, among other things, might cause the hypersynchrony.

All the studies on physiological responsiveness show a large variability within each patient group. If this could be controlled at the outset then it would be possible to establish physiological limits within which a prediction could be made as to how a certain type of patient would respond to one of the available treatments. I believe there exists in each patient a different stress level below which he does not respond and that this level is correlated with the severity of the illness and the amount of psychological deficit present.

With some pharmaceutical agent this physiological change might be corrected. The organism once more functions normally and the cortex is returned to its usual adaptative and flexible level. There are some schizophrenics who do not show this physiological change; they continue to function at stage 2 and are characterized as still being at the stage of resistance. Their physiological and/or psychological defenses are still operating effectively and there has been no breakdown or exhaustion of the normal homeostatic mechanisms. They still experience that physiological state of anxiety.

Two questions remain to be answered. One, does this negate all the data showing the importance of dynamic factors? Two, can

these physiological changes be traced to one center?

Nothing in the above theory negates the proven importance of dynamic and historical factors. All individuals, more or less, have the same primary conflicts and it is the defenses used to handle these conflicts rather than the conflicts themselves that distinguish patients from other individuals. When the socially acceptable defenses are not enough to bear a presistent stress the patient develops neurotic symptoms. When these fail he lapses into a psychosis, the most deviant type of defense. The final phase (stage 3) occurs when the psychosis no longer relieves the physical changes that accompany anxiety and a state of physiological exhaustion results. Nor if a normal person, under mescaline, gives a psychotic Rorschach does this negate accepted test interpretation. The mescaline interferes with the adequate defenses before it interferes with the conflicts because the defenses were learned later in time. This also accounts for the "release phenomena" found in alcoholism. Hughlings Jackson, in his theory of the dissolution of the nervous system, points out that the highest levels of integration are those which are first lost(25).

Having gone this far I feel obligated, although not necessarily qualified, to climb out on the limb a little further with the statement that the hypothalamus appears to be the center for the illness schizophrenia as described in stage 3. Many EEG authorities(13, 17, 22) feel that the majority of cases of hypersynchrony or dysrythmia is basically a subcortical phenomenon, specifically hypothalamic. Cannon's theory of homeostasis(3) practically revolves around thalamic functioning. No other organ of the body is so involved in regulating the biochemical factors of the organism. The hypothalamus, directly or indirectly, exerts control over the adrenal medulla, the posterior and anterior pituitary gland, adrenal cortex, and the gonads. Stellar(49) summarizes the importance of this organ in motivation. Funkenstein, *et al.*(8) have demonstrated the differentiating value of the mecholyl test for various types of schizophrenia and Gellhorn(9) has demonstrated that the mecholyl appears to have a tropism for the hypothalamus. This last offers a means of classifying schizophrenic patients according to physiological reactivity that will permit a statement as to the most beneficial type of treatment. This is summarized in Table 1 which is based on Gellhorn(9).

Note that patients at stage 3 would be unable to respond at a stage-1 level because of the physiological exhaustion. This is exactly what studies by Pincus and Hoagland (44, 45) have shown. In summary, there is a physiological counterpart in many cases of schizophrenia and this physiological change must be reckoned with in treating them. This change is not found in all schizophrenics primarily because the psychological defenses are adequate to remove the stress (paranoids, "acting out" schizophrenics, etc.). When these defenses are not sufficient to relieve the anxiety and the concurrent physical changes there occurs a stage of physiological exhaustion.

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TABLE 1

SUGGESTED TREATMENT ACCORDING TO RESULTS OF THE MECHOLYL TEST (AFTER GELLHORN)

Reaction to mecholyl test	GAS stage	Patients	Suggested therapy
A. Slight hypotensive effect followed by return to normal pressure	1	Normals, neurotics (mild)	Psychotherapy—supportive, cathartic; hypnosis, amital.
B. Slight hypotensive effect followed by rise in blood pressure above normal	2	Severely agitated and anxious	Chlorpromazine; reserpine, lobotomy; psychotherapy. Depression of hypothalamus and hypothalamic-cortical discharges.
C. Hypotension, marked and prolonged—blood pressure fails to return to the original level within 25 minutes	3	Apathetic, depressed	ECT; ICT(?). Increase in sympathetic reactivity with increased hypothalamic cortical discharges. Ritalin, meratran.

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EPIDEMIOLOGICAL STUDIES OF CHRONIC FRUSTRATION-HOSTILITY-AGGRESSION STATES

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INTRODUCTION

In contrast with fear and anxiety reactions, which have been intensively studied since Freud formulated their dynamics, anger reactions have been given relatively little attention in psychiatric literature. Perhaps one reason for this is that fear and anger states tend to manifest themselves differently both in subjective symptomatology and objective epidemiology. Although statistical data as to their relative incidence are lacking, experience indicates that anxiety reactions are more commonly seen in our clinical practice in a ratio of at least 5 to 1, and that psychosomatic ailments are the outstanding presenting symptoms. Although several persons in a group may show anxiety reactions to the same stimuli, true anxiety states appear to be determined more by purely subjective unconscious contents and therefore less apt to be transmitted to others by suggestion. Anger states, in contrast, may be stimulated by long-standing interpersonal difficulties and tend to involve everyone in the situation contagiously so that genuine epidemiological problems exist as one person after another is infected with frustration, hostility, and aggressive impulses. In a previous study (1), I outlined a diagnostic classification of anger states with particular reference to their etiology and contribution to various pathological states. This paper demonstrates the epidemiology of anger states by a clinical-genetic analysis of their incidence in 4 generations of 2 families in which many members were incapacitated by chronic frustration-hostility-aggression reactions.

METHOD

Although isolated anger states in a single person frequently are observed in clinical practice, it is unusual to be able to study their incidence in 4 generations of single families. During the last 10 years we have studied 2 separate families in both of which chronic anger states had been transmitted in epidemic proportions and with resulting psychological incapacitation of many members. In each family, one member had been referred to us for treatment with complaints of chronic hostility and aggression, and in each case the complainant wanted drastic action taken to institutionalize or secure a divorce from the angry person. In both families, however, a detailed investigation revealed that a vicious situational reaction was present and dynamically involving all persons exposed to circles of frustration, hostility, and aggression. In both instances, the complainant was at least as sick as the person complained of, and proper clinical handling of the situation eventually involved study and treatment of all involved persons.

For the purposes of the present study, an intensive historical survey was made of all available persons in both families in order to gather evidence of the existence of psychological disorders of any type. In each case, the members of the first generation were deceased and only anecdotal data could be collected. In family A, 14 members of the second, third, and fourth generations were personally known to us, and 5 of these were studied clinically as patients. In family B, 10 members of the second, third, and fourth generations were personally known to us, and 6 of these had been studied or treated as patients. For brevity, all details of the life histories of the individual family members will be omitted except as they relate to the incidence of anger states and psychiatric diagnosis.

The indication for treating such a large number of members in each family was the fact that large-scale overt hostility and aggression had broken forth between some or all members of each group in the form of open anger reactions, name-calling, temper tantrums, fighting, destructive behavior, and related symptoms. Each family was like an armed camp in which everyone was suspicious, resentful, antagonistic, resistive, or

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openly aggressive to everyone else except where members had taken sides and were engaging in what amounted to intergroup warfare. In both families, matters had reached such an advanced state of deterioration of interpersonal relationships that drastic action had to be taken to prevent separation, divorce, institutionalization or even open violence. Because of the difficulty in securing unbiassed evidence of which much was necessarily ancedotal, the validity of many facts is uncertain and I have endeavored to present the most probable interpretation based upon clinical judgment. Figure 1 presents the lineage of both families with important figures numbered.

Case Materials

FAMILY A

General Background.—Family A got its start in America in the last half of the nineteenth century when A 1 emigrated from England to establish a flourishing manufacturing concern. A 1 is reported to have been a very domineering, stern, autocratic, industrious, intense person who tried to manage and regulate every detail of his business and family life. He succeeded in singlehandedly establishing and operating a large business from which he accumulated a small fortune. However, his domineering methods eventually frustrated and antagonized all who worked for him and particularly his sons who rebelled in various ways against him with more or less success. A 1 refused to delegate responsibility or to take anyone into his confidence with the result that on his death the family business was paralyzed because he had kept all the details in his head and no one else knew what to do. Little is known of A 2 except that she apparently was a docile submissive personality.

Of the second generation, A 9 became an alcoholic who dissipated health and money until in his 40's, he joined Alcoholics Anonymous and achieved a cure; he is currently healthy but unsuccessful and essentially a nonentity. A 7 had a long period of hard drinking but eventually straightened out to start a successful business of his own. A 8 developed a dour, morose personality with little personal charm or vivacity but eventually married. A 5 is a dour, morose, crotchety woman with a blunt, resistive antagonistic manner who has devoted her life to causes; she frightens away most people with her gruffness but is suspected of being kind at heart when her defenses are down. A 6 escaped by leaving the country.

Epidemiological Study.—Personality disorder in this family assumed malignant proportions in the person of A 4 who was the only sibling of his generation who openly resisted the father, A 1. After a long period of rebellion and antagonism, A 4 broke away in his 20's and established complete independence from A 1 by starting his own successful business. A 4 apparently accomplished this through developing an overcompensatory personality reaction which outdid the dominant hardheadedness of his father, A 1. A 4 became exceedingly dominant, opinionated, regulatory, crusty, tactless, blunt, stubborn, angry, hostile, and aggressive in his attitudes toward others to the point where all those under him came to hate him. He unquestionably warped the lives of A 3, A 11, A 10, A 12, and A 14 who came directly or indirectly under his influence.

A 3 was apparently a tender sweet young woman when she married A 4 but within a few years she had developed into an hysterical neurotic invalid who had to be sent away to sanitaria every few years. It appears that A 4 dominated her completely and she was so ineffectual in defending her rights that her only defense was in temper tantrums and neurotic hysteria. She died prematurely in a state of complete inadequacy and frustration.

A 12 acceded superficially to her father A 4 on the surface but developed gastric ulcers in her early 20's for which she had a partial gastrectomy. She escaped from the home by attending private school and later marrying.

A 11 remained at home working in his father's business in the status of the lowest handyman. A 4 always spoke of his son A 11 in a tone of complete disrespect saying: "I never saw a more worthless lout . . . absolutely incompetent and worse than a boy. You can't trust him to do a thing. How did I ever manage to produce such a useless creature?" A 4 was derogatory to his son A 11 in the presence of strangers; kept him on a pittance wage; would not delegate him any authority; and berated him cruelly when he had to advance money to pay the son's household debts, claiming that he was a useless spendthrift. For many years A 11 accepted this abuse, resisting and hating his father behind his back but never daring to oppose him openly.

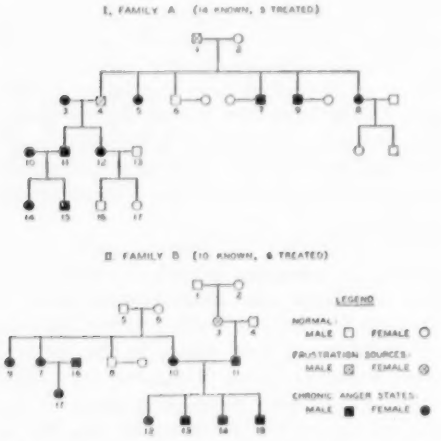

Fig. 1.—Showing the relationships of cases in Families A and B known or treated by the author.

This case came to our attention when A 10 was referred to us in an overt paranoid psychosis by her husband A 11. A 10 had delusions that the Communists had wired her television and had secret agents watching her house all the time. Brief analysis revealed that these paranoid delusions were projections of A 10's hate toward her father-in-law, A 4, and also her resentment and anger toward her husband, A 10, for being so ineffectual and submissive toward his father. As these facts were uncovered during treatment, A 10 began to ventilate her new insights at home and began to quarrel openly with her husband, A 11, who, in turn, gained insight into the dynamics of his own resentments. For a short period, A 10 and A 11 quarreled violently at home even to the point of physical blows, with A 10 lapsing back into paranoid ideas when her hostility became too strong. Medical investigation revealed that A 10 had been developing essential hypertension with intense headaches for several years. She now admits that she had lost her respect for her husband and hated her father-in-law since soon after her marriage 20 years ago.

A 14 was referred to a child guidance clinic because of inability to attend to school work, moroseness, temper tantrums, and open insubordination to her mother at home. Mother and daughter indulge in violent quarrels and name-calling, particularly during periods when A 10 is upset at her husband or father-in-law.

A 15 is a normal vigorous boy except that he is reported to be much like his grandfather, A 4, in temperament, having temper tantrums and resistance to discipline.

Diagnostic Impressions.—(1) Situational psychopathy involving chronic frustration, hostility and aggression states in almost all members of the family. Although the syndrome may be traced to a domineering person in the first generation, acute disorder developed in relation to a member of the second generation who came to be hated by all who were frustrated by his domination and hardheadedness. (2) Different pathological reactions in various family members includes paranoid psychosis (A 10), psychoneurotic invalidism (A 3) with hysteria, chronic anger state with inadequacy (A 11), psychogenic gastrointestinal syndrome (A 12), and childhood behavior disorders (A 14 and A 15).

FAMILY B

General Background.—This family attained local prominence when B 1 became a small-scale financial and political tycoon in the late nineteenth century. B 1 had an ambitious driving personality which quickly overcame all obstacles. He was well enough liked to win many positions of trust in the community and he left a small fortune intact in well-invested real estate and trusts. Little is known of B 2. Our clinical interest begins with B 3 who, as an only child, became somewhat of a crown princess of the family. She was reared in social isolation from "common" children and given her way in everything. Playing alone by herself most of the time, she was pampered by her father with expensive gifts. It is reported that B 3 had some sort of "fits" in early childhood which were thought by some to have been convulsions, but which we interpret as intense temper tantrums in which she ceased to be rational until she got her own way. In any case, she became a lonely, seclusive, headstrong, impetuous young woman with no real interests or friends. She was eventually married to B 4, who was a charming but innocuous person who functioned primarily as a consort or companion, and by whom she had one child, B 11. During all her married life, B 3 completely dominated everyone in the family through her control of wealth which she would threaten to withhold if anyone crossed her. During these years she never tolerated any difference of opinion with her, imperiously asserting her will, and generally showing very immature judgment.

Epidemiological Study.—B 3 was first examined by us at age 70 on complaint that she was spending money unwisely on a male employee who was suspected of attempting to compromise her to secure part of her fortune. For years she had been living alone in her mansion, tended and driven about by this male employee to whom she had given expensive jewelry and an automobile. She had no friends and suspected neighbors and strangers of spying on her house to plot against her. More friendly and solicitous with her dogs than humans, she is alleged to have instructed her chauffeur to spare the dog if there should arise an occasion of having to run down a dog or a child. She was always very unpredictable in her attitudes toward others, alternately very cordial and rejecting toward her son B 11 and his family. She had to dominate every situation or she became impossible to deal with and was very impulsive in telling B 11 or his family that she had remembered them or taken them out of her will according to her transient moods. She created many public scenes by berating old employees or friends who happened to irritate her. Having no real friends, she was only tolerated by relatives who hesitated to oppose her. B 3 was eventually placed in a sanitarium; she resisted at first but later acquiesced. She died at age 73, largely unmourned.

B 11, the only child of B 3 and B 4, had a fairly normal early development considering his mother's unpredictability; was a physically attractive, friendly, intelligent child who presented no serious behavior problems. By the beginning of adolescence, he is remembered as beginning to show a morose, moody temperament associated with a quiet but stubborn determination to have his own way. By his graduation from high school, family affairs were beginning to influence basic decisions concerning education and profession, since his father wished him to study subjects which would eventually enable him to take over supervision of the family fortune and his mother's care. Under such pressure, B 11 did not go to the college of his choice or enter his first choice of a profession.

On completing college, B 11 married B 10 whom he had known since childhood. B 10 had come from a poor but respectable working-class family and had attracted B 3's attention who thought that she

would make a good playmate for B 11. B 10 early resented this compulsory relationship with B 11 but submitted to his attentions because everyone seemed to think it was a good thing. Soon after their marriage, B 10 found that B 11 was stubborn, headstrong, impulsive, temperamental, inconsiderate, and generally selfish in carrying out his own impulses. B 10 always felt somewhat inferior on entering a wealthy family through marriage, and her confidence was further demoralized by B 3's overbearing condescending behavior. For the next 20 years after her marriage, B 10 had to go along with anything her husband or stepmother wanted, suppressing her own individuality and needs, and repressing her frustration and hostilities.

B 10 gradually changed over the years into a resistive, embittered person. She was able to control herself when sober, but gradually developed compulsive drinking, during which she expressed generalized hostility more and more openly. After 17 years of marriage she became so hostile while drinking as to estrange everyone including her husband. After 19 years of marriage, her conflicts became so intense that she entered a psychotic state manifested by delusions of disease and death, paranoid ideas, and loss of emotional control. This psychotic state complicated a pre-existing hypertension with renal complications which had been developing for several years. Under therapy, B 10 verbalized intense hate for her mother-in-law (B 3) and lesser resentments toward her husband (B 11), following which the psychotic episode cleared up.

Open hostility and conflict between B 11 and B 10 flared up 2 years after the death of B 3 when B 11 suddenly developed a passion for the wife of an old family friend. For some years B 10 had been progressively more hostile toward B 11 while drinking and after psychotherapy B 10 could verbalize her feelings more openly to B 11 who was driven into the arms of another woman to secure relief. On discovering B 11's affair, B 10 developed a frenzy of anger which she ventilated openly before her children, relatives, and strangers. She openly accused B 11 of being cruel, abusive, selfish, obstinate, aggressive, and a failure in his roles as father, husband, worker, community leader, etc. There were increasingly bitter family quarrels in front of the children in which B 10 sought to gain their sympathy against their father by presenting him as an evil man. Threats and counter-threats were passed daily, and finally B 10 reached a peak of emotion bordering on a psychotic reaction, and threatened B 11 with divorce, public exposure of his affair, an alienation of affections suit against the other woman, etc. B 11 reacted by becoming alternately depressed and hateful, fighting back against his wife's anger by threatening to institutionalize her or to leave her, and by becoming progressively incapacitated himself by continuous frustration, anger, guilt, and anxiety leading to suicidal thoughts which he expressed by suddenly taking to carrying a gun on his person. Fortunately, this catastrophic situation was resolved by psychotherapy for all parties involved.

The children reacted to this situation in individual ways. B 12, the oldest girl, became moody and openly critical and resentful toward her father. B 4; she has lost much of her respect for him and openly sides with her mother. B 13 is a phlegmatic but attractive boy whose only overt symptom is a somewhat lowered school performance. B 14 is an adolescent boy in open rebellion against his parents, particularly B 11. He is aware of his father's moodiness and is always looking for a peculiar look in his eye. B 15, the youngest child, born just prior to his mother's psychotic episode, is a very tense anxious child, overdependent on his mother, crying easily, and markedly immature in his emotional development.

It is interesting to study the indirect influence of B 3 and B 11 on B 10's family. B 10's parents, B 5 and B 6, were well-adjusted working people who had a friendly, emotionally-positive family life. B 10 was influenced by B 6 to marry B 11 because it was felt to be a step up in the world. However, when B 10 and B 11 began to have difficulties with each other and with B 3, the rest of B 10's siblings became involved to some degree. B 9, the oldest sister, came to regard herself as B 10's protector and she became increasingly distraught and hateful toward B 11 as she watched her sister, B 10, becoming more sick and unhappy. B 9 has intruded sufficiently so that B 11 has telephoned her to mind her own business and keep her hands off the situation; in the meantime, she is hateful and resentful to B 11. B 7, another sister, has been more passively protective of B 10, interfering only indirectly but nevertheless effectively in times of need. B 7 married B 16 who later developed a manic-depressive psychosis, probably but not certainly, in reaction to frustration over B 7's involvement in B 10's affairs. B 17 is an adopted daughter, introduced to B 7 by B 11, who was also treated by us for a psychoneurotic immaturity state with character disorder which, also probably but not certainly, developed in reaction to B 7's relation with B 10 and her family.

Diagnostic Formulations.—(1) Situational psychopathy involving a vicious circle of frustration-hostility-aggression states in many members of a family. An epidemic of chronic anger states may be traced to the influence of a member of the second generation who came to be hated by all who were influenced by her. (2) Different pathological reactions in various family members, including chronic character disorder (B 3), reactive depression in an hostile personality (B 11), chronic frustration state with alcoholism and psychotic paranoid reaction (B 10), various degree of hostility and anxiety (B 8, B 9, B 12, B 13, B 14, B 15), manic-depressive psychosis (B 16), and neurotic immaturity state and character disorder (B 17).

Discussion

Acute and chronic frustration-hostility-aggression states tend to be socially transmissible in epidemic form because of the contagious, inescapable nature of the emotions involved. It is almost impossible to avoid the

influence of a hateful person in one's environment, particularly when such person can exert great personal power to frustrate by control over money, job, or family discipline. While the effects of anxiety are largely internal and subjective except in extreme forms when symptoms may incapacitate objectively, anger reactions tend to be directed outwardly toward the environment where other persons cannot escape them. Angry emotion is contagious in that it stimulates a chain reaction of an-eye-for-an-eye which eventually may assume the proportions of a situational psychopathy infecting everyone who comes in contact. We have used this analogy in explaining chronic anger states to patients, pointing out that a hateful word or action is like a virus infecting all exposed to it, and tending to be reciprocated in kind to establish a vicious circle of reinfection.

Acute and chronic frustration-hostility-aggression states constitute definite clinical entities whose dynamics are now clearly understood. Because of their contagious nature, it is necessary to study and treat all persons who may be expected to have come in contact with them. Therefore, in contrast with other clinical entities which involve primarily only the patient himself and can be treated individually, the acute and chronic anger states must be regarded as potentially having epidemic proportions which may necessitate group psychotherapy. It is interesting to note that in this type of situational psychopathy, the person referring another person as in need of therapy may, in fact, himself be the one who requires attention. We have had many cases in which the person making the complaint was actually the sick person.

Summary

This paper presents evidence illustrating the transmission of chronic frustration-hostility-aggression states assuming epidemic proportions. Intensive studies were made by clinical-genetic methods of 2 families in both of which the effects of chronic anger states could be demonstrated through 4 generations. It apears that anger has different pathological implications than anxiety in that its outward manifestations may involve other persons in establishing an epidemic of negative reactions. The dynamics of the disorder are outlined with illustrations of individual reactions among those exposed. These frustration-hostility-aggression states are regarded as major psychiatric syndromes since the degrees of personal and social incapacitation may be very great, particularly when many persons become involved in a vicious situational psychopathy.

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PSYCHIATRIC NIGHT TREATMENT UNIT IN A GENERAL HOSPITAL [1]

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The idea of a Night Centre germinated 6 years ago, but owing to lack of physical facilities could not be realized until about a year and a half ago. These facilities are comparable to those of the Day Centre(1) but are aimed at the treatment of individuals who are still able to carry on with their employment and who seek help and can be helped without having to take time off from their occupation. Treatment is offered 5 nights a week, Monday to Friday inclusive, patients reporting to the hospital after working hours (around 6:00 p.m.), receiving their treatment, spending the night at the centre, and leaving the hospital the following morning in time to report back to work. An evening meal and breakfast are served. No treatment is given during the weekend, both to allow the patients to retain intact their relations with families and friends, and to allow the psychiatric staff some respite from their onerous duties.

The night centre and the day centre units are situated on the same premises, since the night centre patients occupy the beds vacated by the day centre patients, who report to the hospital at 8:30 a.m. and leave at 4:30 p.m. daily (Monday to Saturday). Indeed, the 15 beds available (9 female and 6 male) are occupied by 3 different groups of patients during each 24 hours: the day patients undergoing subcoma insulin therapy in the morning; the patients recovering from electroshock therapy in the afternoon; and the night centre patients in the evening and throughout the night. Thus, 15 hospital beds take care of 45 patients every 24 hours.

Psychotherapy, both individual and group, modified insulin therapy, electroshock therapy, and abreactive techniques are available, together with occupational, recreational, and social therapy.

[1] Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

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SOURCE OF REFERRAL

The original aim of the night centre facilities being directed toward the early treatment of individuals suffering from tension states, anxiety, obsessions and depressions, etc., contact was made with the doctors in charge of the medical departments in various industries, to let them know about the new facilities available at the hospital. Curiously enough, though much enthusiasm was expressed at the inauguration of these facilities, the expected influx of patients from such sources in the beginning failed to materialize. What did occur, however, was prompt occupation of the beds by patients referred directly by the members of the psychiatric staff of the hospital.

It is common knowledge that some patients during psychotherapy may, at times, for causes both endogenous and exogenous, develop an acute exacerbation of symptoms, such as to warrant a brief stay in a hospital. Perhaps an example may illustrate this point.

A female patient of professional status had to be treated about 4 years ago, as an inpatient, for a schizophrenic state, following which she was enabled to carry on with her work quite adequately, supported by infrequent psychotherapeutic sessions, until about a year ago, when once again there occurred a flare-up of her symptoms, with the development of marked ideas of reference, a sense of unreality and confusion such as to seriously handicap her ability to work. Further active treatment in hospital appeared to be indicated, but I was somewhat loath to recommend her readmission, both because this might have led to her losing her job permanently, and because it would have intensified the patient's anxiety. The conflict of course was in myself, but while listening to the patient the conflict resolved itself by the patient mentioning a dream in which she had visited my home and I had been "very nice to her." I fulfilled her wish by inviting her to the night treatment unit; she readily complied, and after attending the night centre for about 6 to 7 weeks, her acute symptoms remitted and she was tided over her psychotic episode. Throughout this time she carried on with her job and is still doing well.

Of over 200 patients treated at the night centre during the past year and a half, more

than half have been referred by psychiatrists, either on the staff of this hospital or working outside the hospital. Other sources of referral, apart from doctors in industry, are medical practitioners, the various O.P.D. services of the hospital, and social agencies.

TREATMENT

The term "night centre patients" refers to those who come to the centre for full-time treatment, *i.e.*, patients who stay in the hospital overnight from 6:00 p.m. to 8:00 a.m. the following morning, daily, 5 times weekly. The average stay is about 28 days. All these patients on arrival go to bed and receive subcoma insulin therapy. This form of treatment which, on the surface may appear to be used rather indiscriminately, has so far proved to be quite rewarding for the following reasons: (1) most of the patients have been struggling with their anxieties for some time and they derive some benefit from the physiological effects of insulin, gain in weight, etc., as well as from the psychological ones; (2) the treatment is standardized and the patient who heretofore had tended to believe his condition unique, finds relief in the realization that other people are prey to similar anxieties and needful of similar treatment; (3) the uniformity of treatment is a common denominator which aids in fostering a community of feeling without undue regressive features, since the treatment lasts only about 2 hours; (4) the patients are usually tired by the time they arrive at the hospital, having been at work all day, and the idea of lying in bed for 2 hours is quite appealing to most of them; (5) the patients feel that something positive is being done for them.

Following the insulin treatment the patients have their dinner in the cafeteria and are then seen for individual psychotherapy. Some of them also attend the weekly group psychotherapeutic session.

Earlier mention was made of diversional and occupational therapy available for night centre patients. In actuality, our experience has been that these patients do not avail themselves readily of such forms of therapy. Indeed, one of the outstanding features of night centre patients, as compared with inpatients or day centre patients, is the lack of cohesion in their interpersonal relationships, most patients preferring to spend the time by themselves or to pair off in twos. In other words, there is practically no group formation, no identification with a leader, and no apparent dependence upon the nursing staff. This phenomenon gave rise to some anxiety on the part of the therapeutic team, especially during the first few months of the service. The nurses' notes show some uneasiness and some frustration. "The patient does not mix," "the patient socializes poorly," "the patient refuses to participate in games and other social activities," are very frequent descriptions of this lack of participation in group activities, leading to a feeling of rejection on the part of the nursing staff, which heretofore had been trained to observe group interactions, to foster the formation of a psychological unit, and to whom lack of socialization had become equated with lack of improvement(2).

As well described by the psychiatric resident, "the general pattern at night seems to be for the patients to retire to the sitting room, relax, smoke, put their feet up, read the paper, and listen to the radio." Fatigue may be one of the factors responsible for the lack of group integration, as evidenced by the nurses' notes, "always very tired," "falls asleep in the chair," "retires early." Other factors which deserve mention are: (1) night centre patients are not suffering from as severe a neurosis as patients admitted to the inpatient or day patient services; (2) they are still carrying on with their daily occupations and have therefore retained intact their object relationships both at work during the week and at home during the weekend; (3) the regressive features so common in patients, particularly those admitted to hospital, are less apparent in night centre patients, possibly because of the above 2 points.

With the adoption of an attitude of "laissez faire" the general tension reduced itself noticeably.

Electroshock treatment for patients who are at work during the day has to be restricted to a maximum of 2 treatments per week, and preferably to 1. In a few selected cases we have treated depressive states by giving ECT on Friday evening, thus preventing and minimizing the impairment of

memory which might seriously handicap the performance at work.

One case that comes to mind is that of a private secretary who though seriously handicapped by a fairly severe depression, had persisted, in her obsessive manner, to carry on with her job without seeking psychiatric help until she could hold out no longer. When seen, she refused to be admitted for treatment but accepted the night centre facilities. She was given ECT on Friday evening, and when she appeared for work the following Monday she felt so much improved that her co-workers remarked on the change and she had to hide her feelings of well-being just as prior to treatment she had to hide her awful despondency.

Cases of severe depression requiring the usual routine of 3 ECT per week are not suitable for treatment at the night centre, unless the patient is unemployed or gives authority to the therapist .o get in touch with the employer, suggesting that he overlook the temporary decline in the employee's performance. Subshock treatment, on the other hand, may be used quite extensively at the night centre.

These physical methods, however useful, do not replace the need for psychotherapy which still remains the most useful tool in the treatment of neurosis. Night centre patients, on discharge, are therefore advised to report to the unit once or twice a week, after working hours, for individual psychotherapy and for group psychotherapy if they have attended sessions during hospitalization.

The night centre offers its facilities not only to patients who require the "full" treatment, but also those who do not stay overnight but who report to the centre after working hours for individual and/or group psychotherapy.

SELECTION OF PATIENTS FOR THE NIGHT CENTRE

Most cases of psychoneurosis can be treated with good results at the night centre. However, the best results have been obtained in previously untreated cases suffering from fairly acute syndromes of short duration. For those who have been undergoing psychotherapy prior to admission to the centre and who have developed acute exacerbations during the treatment, therapy is directed largely to the symptomatic relief of the exacerbation.

The interpretation of results from treatment necessarily has to be related to the premorbid personality of the patients and to their selection. Psychotic conditions such as chronic schizophrenia are obviously not suitable for treatment in a night centre, nor indeed are they suitable for treatment even as inpatients in the psychiatric department of a general hospital, which is equipped mainly for relatively short-term therapy for as many patients as possible in as short a time as possible. Generally speaking, acute alcoholics and most of the psychotics are not suitable for treatment at night centres. Following is the diagnostic distribution of the last 100 patients admitted to the centre: psychoneurosis, 56; endogenous depression 5; involutional depression, 14; mixed depression, 10; schizophrenic reaction, 4; other diagnoses, 11. The male-female ratio is about 2 to 3, a higher male ratio than that usually seen in the inpatient or day centre services where the ratio tends to be about 1 to 4. This can be explained on the basis of male patients accepting therapy in hospital provided it does not interfere with their working hours. The average duration of treatment is 21 days for the male population as compared with 28 days for the female population.

The distribution of age is predominantly within the 20 to 40 age group.

The distribution of patients by occupation is so extensive as to lose its significance, since most of the occupations coming within the low-to-moderate income brackets are represented. However, the largest percentage of patients come from the so-called "white-collar" group, such as clerical staff, school teachers, librarians, nurses, etc.

The following examples are illustrate the types of cases most commonly seen at the night centre:

A male of 45, a mechanic, was admitted with a 4-month history of asthma, depression, loss of appetite, loss of weight, and impotence. He had also been complaining of palpitations for some time, and anxiety. His illness appeared to have been precipitated by his concern about his wife's health. Physical marital adjustment had always been poor but there was a good understanding on other grounds. There was a strong feeling of guilt in his relationship to his wife. He was given 32 subcoma insulin treatments and psychotherapy on a rather superficial level. When discharged he showed definite improvement, had gained 10 pounds, felt lively, and his impotence was relieved. Precordial pains

and anxiety crises had also disappeared. He still suffered from mild asthma symptoms, which were easily controlled with medication. Throughout his stay in hospital he was able to carry on with his occupation. He will be followed up psychotherapeutically at regular intervals.

A male, age 23, preoccupied by erotic fantasies, obtained some solace from heavy drinking. He showed marked evidence of anxiety which diminished noticeably with psychotherapy at a fairly superficial level and a total of 23 subcoma insulin treatments. He progressively became less anxious, re-established satisfactory relationship at home, became less preoccupied about his fantasies. Patient carried on with his job during the entire treatment program, and was discharged with the understanding that he be seen once weekly to carry on with psychotherapy.

A female patient, age 35, stenographer, on admission complained of anxiety, insomnia, anorexia, and domestic incompatability. These symptoms had been present for about 6 months and had gradually increased. Her family background revealed an overaggressive mother and a rather passive father. She married a young man who was making a career in the army, but her husband entered college after the war and during the college years when he was dependent upon her, patient appeared to be quite well adjusted. Marital difficulties, together with her symptoms, made their onset following her husband's graduation from college and consequent independence. The diagnosis was an anxiety reaction in an obsessive-compulsive personality. Patient received a course of modified insulin therapy and psychotherapy, and was discharged much improved.

A male, age 29, laborer, was referred from Casualty, as he had shown marked distress and depression following a serious quarrel with his wife. Domestic relationships had always been somewhat unsatisfactory. He had been drinking to excess, was extremely jealous of his wife, and the history showed a marked dependency on a domineering mother, who disliked his wife intensely. He requested treatment only after his wife threatened to leave him and a minister had suggested he needed psychiatric care. On admission he was tense, restless, complained of depression, loss of appetite, inability to control his "nerves." He showed some ideas of reference about a friend at work, felt hopeless and dependent. Complained of low back pain. He was given 22 modified insulin treatments, together with psychotherapy, and showed steady improvement. The anxiety was lessened and patient himself reported complete change in his attitude at home and at work, with a corresponding change in the attitude of his wife and friends. In psychotherapy he became aware of his dependency on his mother and there seemed to be a definite change on his part in this respect. He was discharged much improved, with a diagnosis of anxiety reaction in a mild paranoid personality.

Female patient, age 42, was referred through social service for anxiety, occipital headaches, pain in left limbs that could not be fully accounted for by her arthritic condition. For 2 years her husband had been unable to work, following a stroke leading to hemiparesis. She had several children, none of them sufficiently old to work. Patient was burdened by the whole responsibility of managing with the money she was receiving from welfare associations. Recently she had been feeling more overwhelmed by financial and emotional difficulties. She received a total of 29 insulin treatments, together with psychotherapy. In psychotherapy she was able to deal with her guilt feelings and to accept her ambivalence toward her husband's illness. She was discharged much improved and will carry on with psychotherapy as an outpatient.

Male, age 32, tool-maker, on admission complained of acute distress, obsessive frightening thoughts, fear of losing his mind, insomnia, and anorexia. Patient received supportive psychotherapy, together with modified insulin treatment and chlorpromazine in average doses of 200 mg. daily. His anxiety state lessened. He gained weight and although the basic problems were left untouched, he showed good evidence of a remission. Diagnosis: schizoid personality. He carried on with his job throughout the course of treatment, and will be seen on a regular basis for supportive psychotherapy and medication.

In a female, age 43, suffering from insomnia, palpitations and depressive periods, poor appetite and difficulty in swallowing, insulin subcoma, and psychotherapy resulted in disappearance of the presenting symptoms with weight gain, plus lifting of the depression. In this case the group setting and support had been one of the most important factors in her recovery. This patient did not stop work during treatment.

Male patient, age 30, a professional man, on admission, complained of insomnia, chronic tension, phobic symptoms, anxiety, and work inhibitions. Acute symptoms were reduced by insulin and sedation with chlorpromazine, together with psychotherapy. Work was not interrupted and the patient was able to resume relatively normal family life. The diagnosis was character neurosis and acute reactive depression. He was discharged much improved and arrangements were made for him to undergo a fairly extensive course of psychotherapy.

Male, age 35, unemployed, was previously treated for an anxiety reaction with secondary alcoholism in the inpatient psychiatric service of the hospital. His early history revealed that he was the only son of a very successful father and a doting mother, who fostered in him an overdependent relationship. Considerable psychosexual difficulties had developed following his marriage, and there were strong indications of a passive-aggressive personality, the aggressive component of which became manifested when thwarted in his goals. There was also a long history of overindulgence in alcohol. This patient was transferred from the inpatient service to the night centre in order to facilitate his search for a new occupation. He received a course of modified insulin therapy and psychotherapy, which in his case was quite intensive. While undergoing treatment he was able to secure a job and he was discharged much improved.

The night treatment unit has not been functioning long enough for us to reach any definite conclusion as to results of treatment; however 80% of the patients so far treated have not required readmission to the psychiatric department and the great majority of those who carried on with their employment during treatment are still employed. The results of treatment are also dependent on the psychotherapeutic facilities offered the patient following discharge. However, it has been our experience, experience which for the moment has to rest largely on general impressions, that most of the patients are able to fend for themselves following treatment at the night centre without need of extensive psychotherapy, apart, perhaps, from 2 or 3 interviews following discharge.

The night centre is only one of several facilities offered by the department of psychiatry of the Montreal General Hospital, and its functions and activities have to be related to those of the other services and more particularly to the psychiatric inpatient, the day centre, and the outpatient departments. All these services are situated on the same floor and are closely integrated with one another, not only physically but also functionally. Thus patients who are discharged from the inpatient section may be transferred to the day centre to facilitate their rehabilitation and from the day centre to the night centre to facilitate their adjustment to work; or they may be transferred from the inpatient service or the day centre, directly to the night centre—or the opposite may occur, as in the case of a patient who is admitted to the night centre on a provisional basis and who, because of lack of sufficient improvement, is transferred to either the day centre or to the inpatient service. Not infrequently patients suffering from a psychiatric disability severe enough to require admission to the inpatient service, cannot be admitted because of bed shortage. In such cases the patient has been treated at the night centre or at the day centre, or at both places, pending availability of beds in the inpatient section, and not infrequently the treatment has proven sufficient to make hospitalization unnecessary. These various facilities make the treatment of psychiatric disorders more flexible and more atuned to the various degrees of severity of emotional disturbance. They also foster a more optimistic attitude, both in the patient and in the psychiatric staff. The total number of patients treated at the night centre is relatively small as compared with the total treated by the psychiatric department (over 2,500 patients during the year 1955).

PSYCHIATRIC STAFF—NIGHT CENTRE

Most of the work is performed by a small psychiatric team consisting of a senior psychiatrist who acts as supervisor and is responsible for both individual and group psychotherapy, a resident who is responsible for the physical treatment methods and for individual psychotherapy, a fully qualified psychiatric nurse, a nurse's aide, and a male orderly. Any problems which may arise at the night centre relating to specific cases or to the general management of the unit are brought up for discussion at our weekly meetings attended by the psychiatric staff and ancillary services.

Conclusion

The advantages of a night centre may be briefly summarized as follows: (1) the main function is to enable individuals to undergo psychiatric treatment without interruption of their working hours; (2) it facilitates the acceptance of psychiatric treatment by those individuals who, for reasons other than financial, would refuse treatment if this involves hospitalization. Not infrequently the fear of insanity is such that hospitalization is interpreted by the patient as confirmatory evidence of their unwarranted belief of being "insane"; (3) it enables individuals to accept psychiatric treatment without disclosing this need to anyone apart from the immediate members of the family. This is especially important to the employee who fears the loss of his job or jeopardy of promotions, should his employer know that he is "a psychiatric case"; (4) it is economical to both the patient and the hospital; (5) treatment at the night centre does not interfere with the patient's social activities, particularly since he has the weekends to himself. This, together with the fact that he is employed during the day, tends to minimize the regressive phenomena contingent to hospitalization and

overdependence upon the hospital; (6) it facilitates the weaning process of patients previously hospitalized in the inpatient section or in the day centre, by giving the patient some support during the early stages of his re-adjustment to work; (7) it makes it possible for individuals to undergo psychiatric treatment during the only time they can be spared from their daily activities, *e.g.*, the mother who can undergo treatment only after the husband has come home to take care of the children; (8) it offers facilities to individuals who can be helped by weekly psychotherapeutic interviews after working hours; (9) it provides an over-night service for the emergency psychiatric night cases who appear in the casualty department of the hospital.

I trust that the enumeration of these several advantages does not lead one to the assumption that a night treatment unit is the answer to the immense problem of the treatment of mental illness. It is purely a small extension of the psychiatric service which any large general hospital should be able to provide. It is, however, a new venture, and I trust a seed which, in time, may sprout and lead to the establishment of night treatment facilities in other hospitals and possibly also in specialties other than psychiatry.

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DISCUSSION

F. J. Gerty, M. D. (Chicago, Ill.).—I know of no close counterpart for the very interesting organization of patient services which Dr. Moll has set up at the Montreal General Hospital. As I understand it, besides offering regular inpatient and outpatient service this hospital has two groups of patients who are in a somewhat unusual category: Those who come in for treatment during the day hours and those who come in the evening and remain overnight, the latter being in the night treatment group. It is not difficult to understand the appeal which the offering of such a night service would have to certain groups of patients, particularly psychoneurotics and others who are anxious and depressed, especially in view of the use of subcoma insulin followed by food, rest, and sleep. From Dr. Moll's statistics it is apparent that about 85% of the patients fall in this group diagnostically. The patients are in the adult working age range chronologically and the percentage of male patients is greater than it is on the average in an inpatient service.

I shall comment on two matters which Dr. Moll has mentioned and raise an inference as to a third. He states that these patients do not tend to form social groups or to be much interested in group psychotherapy. In this they differ from the day and inpatient group. This evidently bothers the nurses a little. The other matter concerns the predilection of these patients to retire to the sitting room to relax, smoke, read the paper, and listen to the radio. Putting together the facts that these patients are largely in a psychoneurotic and depressive group and that they are employed during the daytime, one would almost expect the behavior to be about as described. In private practice, the neurotic and depressed patient is commonly a problem concerning the use of his evening hours when he is at home. He either goes to sleep early in the evening or wants to go to sleep earlier than most people do. The result is that if he is able to get to sleep at all, he wakes up much earlier than he should, sometimes at midnight or 2:00 or 3:00 o'clock in the morning, and is then bothered about spending the rest of the night in a wakeful state. For such patients, the hospital environment should be very reassuring. My other comment is this: Many neurotic patients, while expresaing the consciously believed wish to be at home, often do not wish to be there at all. Falling asleep in the living room and the weekend headaches of many neurotics seem to be evidence for this unconscious rejection of the home and its denizens. Dr. Moll's observations are very interesting. I envy him his ability to get the number of psychiatrists that are needed to provide a senior man every night in the week.

AN INPATIENT PSYCHIATRIC SERVICE FOR CHILDREN IN THE TEACHING HOSPITAL[1]

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The University of Minnesota Medical School and University Hospitals has had a full-time psychiatric service for children since 1938. It originally functioned on an outpatient basis, but it was soon apparent that a period of hospital study was essential to the more complete understanding of many children referred for care. Until 1952, a few children were admitted each year for study and treatment to either the pediatric or adult psychiatric service. Neither proved too satisfactory. In October 1952, an inpatient psychiatric service for children, made possible by legislative appropriation, began operation. This service is an integral part of the total program of the Medical School and the University Hospitals.

As far as we have been able to ascertain, this service is one of the few inpatient psychiatric services for children in the country which is an intrinsic part of a general teaching hospital program. This paper briefly describes this service, delineates in particular how it contributes to the over-all teaching and research program of the medical school and hospital, and calls attention to some of the lessons learned over the past several years. We hope that this report may be helpful to those contemplating the development of a similar service.

The primary purpose of a hospital is service. However, the teaching hospital has 2 additional responsibilities which require due consideration—namely, teaching and research. Important, therefore, was to define a plan which would satisfy these 3 requirements.

For over a year prior to the opening of the inpatient psychiatric service for children, the staff to be responsible for its administration met periodically with supporting hospital personnel to define goals and procedures and to plan its integration into the total hospital program. In the formulation of plans, we were required to keep in mind the following important considerations: (1) The service must serve the 3 basic responsibilities of a teaching hospital. (2) There are few psychiatric facilities for children in Minnesota. (3) As a state facility, we would be expected to provide the maximum help to others consistent with good practice and procedure. (4) Since our hospital serves the State of Minnesota, many of our patients would come from distant parts of our state. (5) Consistent with our teaching and research responsibilities, we should provide a steady flow of patients for study—and from this group a small, well-selected case load for treatment and research purposes. (6) As a teaching hospital, we could not expect to assume treatment responsibilities except for a relatively small number of cases.

In recognition of these important facets of the problem, it was decided: (1) that we should plan a relatively small service—the maximum number eventually to be served at any one time was not to exceed 24 patients; (2) that while it was essential to have a small nucleus of treatment cases, our maximum efforts could best be expended in a comprehensive study of a maximum number of children per year, with the view toward helping others plan more effectively for the child studied; (3) that to achieve this purpose, the average length of stay in the hospital would be limited to approximately 30 days. Following such a period of study we could, with others in the community at large, formulate a plan of management which would assure more adequate understanding and management by others. In this way, more children might be better served and they, in turn, provide teaching and research opportunities for us.

Further, it was recognized that, as a state facility with multiple responsibilities, our efforts should be directed to: (1) preparation

[1] Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

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of more adequately trained personnel on all levels, but more particularly the physician, and (2) along with others, we should strive to assist in defining the unmet needs of the children and youth of our state. With these objectives in mind, we began operations in October 1952.

Our station is located on the sixth floor of the west wing of the University Hospitals, contiguous to the pediatric and psychiatric services. Since some of the children require close supervision and control, it is a closed service. Presently, the station staff consists of nurses, occupational therapists, nurses' aides, orderlies, and a school teacher. Full-time professional staff consists of 3 physicians (2 psychiatrists and 1 pediatrician), 2 clinical psychologists, a psychiatric social worker, and a part-time speech clinician. Graduate fellows in psychiatry and pediatrics rotate through the service, spending a minimum of 3 months with us. Other graduate students—psychologists, occupational therapists, and nurses—also spend time with us. It is planned eventually to develop a comprehensive program of training for psychiatrists and others interested in career training in the field of child psychiatry.

Of necessity, the daily routine and general program is different from the other children's medical services. The patients are up and about and dressed in their own clothes. An effort is made by the staff to develop and maintain an informal, friendly atmosphere which permits a patient to express himself as needed, but which at the same time establishes limits which may be therapeutic. This at times is difficult. With the aid of frequent conferences and management orders, efforts are made to assist the station staff to understand each patient in order to deal more skillfully with his particular problem.

The nurses, who are not in uniform and live more intimately with our patients, are of great help in understanding the patient and his problems as they reveal themselves. When the patients are not being seen by either the physician or psychologist, the nurses, with the occupational therapists and school teacher, strive to keep them occupied. Arranging daily and evening activities, group discussions, and giving individual attention to the child as needed keeps the daily schedule full for all concerned.

Weather permitting, patients get out of doors at least twice a day. During the spring, summer, and fall, picnics and excursions away from the hospital are arranged. Since the nurses are not in conventional dress and many of our patients are quite alert and mischievous, an occasional amusing event occurs to brighten the day. Visiting hours for parents and relatives are liberal and serve usefully in our observations.

In accordance with hospital policy, all patients are referred to the University Hospitals by their family physician. The majority are studied in the pediatric outpatient department by senior medical students under supervision. Children with psychiatric problems are subsequently seen in consultation by a senior member of the child psychiatry staff. If, after careful review, hospital study is indicated, arrangements are made for admission.

At the time of admission, cases are assigned to one of the senior fellows on our service and also to one of the junior medical students serving their psychiatric clerkships. All cases are closely supervised by a senior staff person.

In accordance with sound medical procedure, a comprehensive study is done on each patient admitted. It includes the following:

1. A detailed medical and psychiatric history is obtained primarily from the parents, who are required to be present at the time of admission. Parents are assigned to the junior medical students, who assist in obtaining historical data. Parents are also seen by members of the senior staff or residents not only for historical information, but also for interviews during the patient's hospital stay. In our experience, this procedure provides a nice system of checks and balance. Parents also take the Minnesota Multiphasic Personality Inventory. Since many of our patients are under state guardianship or are under care of other agencies, close cooperation with them is important. In such situations, the psychiatric social worker plays an important role in working out the details of referrals, in obtaining supplementary social data, and in general, keeping close supervision of such patients. Supplementary information is obtained from agencies and schools whenever indicated.

2. Physical and neurological examinations are done not only by the junior medical student assigned the case, but by the fellow as well. When indicated, consultation with other services of the hospital is provided.

3. Basic laboratory studies are done, which, in all cases, include an electroencephalographic study. Other special physical studies are done as required.

4. A comprehensive battery of psychological tests is given to every patient, regardless of age or presenting complaint. Included in this battery are: (a) Tests of general intelligence. We are not only concerned with the child's intelligence quotient *per se,* but also how the patient achieves it; (b) projective tests such as the Rorschach, Thematic Apperception Test, and, whenever possible, the Minnesota Multiphasic Personality Inventory, which may help to define the patient's basic personality structure and to indicate probable sources of tension; (c) tests such as the Bender Gestalt, which may be helpful to determine whether a basic central nervous system deficiency is contributing to the child's difficulty; (d) direct observation of the child during this phase of the study is likewise recorded.

Many of our patients are incapable of sustained effort except for a short period. For this reason, the completion of this phase of study is often time-consuming. It is estimated that the average time required for this phase of the study is 8 hours.

5. Each patient is seen daily by his physician. Informal ward contacts, play or office interviews, observations of reactions to examinations and procedures, and observations of the child in the group provide the psychiatrist with valuable data to be integrated into the total evaluation. Because of the high frequency of marked disturbances in interpersonal relationships in our patient population, it is often difficult to secure "the child's own story" from formal interviews alone. However, this often is the first time the child has had an opportunity to speak for himself, and some children are able to use the opportunity constructively.

6. Whenever possible, we work intensively with the parents. Since a good number of them reside in distant parts of the state, we are often limited in these efforts. Work with parents is done either by the resident under direction or by the psychiatric social worker, who collaborates on selected cases with the residents. This arrangement provides an excellent opportunity to teach the functions of a social worker and how she participates in treatment.

7. Occupational therapy is an essential part of our study. It is provided not only to keep the patient occupied, but also to help in self-expression, and for its therapeutic effect. Wood and metal work, clay modeling, painting, making of puppets and staging puppet shows provide for such creative expression. Through such activity, it is possible to determine how the patient reacts to the group situation in which space, tools, and supplies must be shared. Also provided is the opportunity to observe how well the patient uses head and hand in the completion of the project selected.

8. During the school year, all patients of school age attend school. School experience is provided not only to help children admitted to the hospital from "falling behind" in the work, but also to help us understand many of the learning problems frequently associated with serious adjustment difficulties.

A small but significant number of handicapped children are referred to us primarily for diagnostic study. This group includes those who are deaf, blind, cerebrospastic, or who have a speech problem. Usually, the main concern is to determine the educability of such individuals. In many of these cases, the speech clinician assumes an active role in cooperation with others.

From October 1952, to May 1956, 400 children from our state have been admitted to our service. Ages have ranged from the pre-school period to age 16. The percentage distribution is approximately as follows: Preschool age range (to 6 years)—10%; middle and late childhood (to 12 years)—45%; adolescence (to 16 years)—45%. Sex distribution is 2 males to 1 female.

As expected, the average length of hospital stay has been approximately 1 month. During the comparatively short time we have been active, we have been impressed by the significant number of serious adjustment problems which occur in children in the younger age ranges.

Upon the completion of our study, the case is summarized and a plan of therapy is

formulated. Since this is often a difficult task because so many variables need to be considered, it requires intensive cooperative effort on the part of the entire staff.

For those patients who will not be followed on an outpatient basis, as clear a presentation as possible is given the parents or others who are responsible for the child at the time he leaves our hospital. For those who come from distant parts of our state, we frequently arrange case conferences with other agency workers. It is an unusual week that we do not have one or more such conferences.

Hospital regulations require that a diagnosis be made in accordance with the standard nomenclature and entered on the chart of every patient admitted. Such diagnoses are made with care, since once made and entered upon the chart, it becomes a part of the child's life henceforth. While a firm diagnosis is made when we have supporting evidence for it, the child is always given the benefit of a doubt.

Since our service began, the following diagnoses have been made in accordance with standard nomenclature in the ratios indicated: (1) Mental Deficiency (all types)—20%; (2) Chronic Brain Syndrome (without mental deficiency)—10%; (3) Acute Brain Syndromes (all types)—4%; (4) Adjustment Reactions (all types)—30%; (5) Psychoneurotic Reactions (all types)—10%; (6) Sociopathic Personality Disturbances—4%; (7) Personality Pattern Disturbance—10%; (8) Psychophysiological Reactions—2%; (9) Schizophrenic Reaction Type—3%; (10) Observation only—no diagnosis or removed against medical advice—7%.

The therapeutic implications of the above are obvious and will not be elaborated here. It is becoming increasingly apparent, however, that children's adjustment problems cannot be completely accounted for solely on the basis of disturbed interpersonal relationships.

Long before the establishment of the inpatient psychiatric service for children, our teaching goals were defined. They are briefly: (1) to teach the students—on all levels—the basic essentials of psychological growth and development of the individual; (2) to create in the student an awareness of the possible factors responsible for deviations in development; (3) to develop adequate and useful methods of evaluating and equating all factors important to any given case; (4) to introduce the student to as broad a range as possible of deviations in human behavior; (5) to provide clinical experience on as broad a base as possible to develop diagnostic as well as therapeutic skills; (6) to develop an appreciation of and skill in cooperative effort in the interest of the patient's welfare; (7) to create an awareness of the accumulating literature in the behavioral field as it pertains to children; (8) to enhance the students' knowledge of community resources and to develop an appreciation of how these might be used expeditiously.

The addition of the children's inpatient psychiatric service has enhanced our teaching program on all levels of instruction. During the junior year, approximately 40 hours are devoted to didactic teaching, case conferences and small group discussions. The inpatient service provides first-hand opportunity to have contact with patients and parents under supervision. Much informal teaching takes place every day in the discussion and clarification of the immediate problems. The psychiatrist has an opportunity to discuss physical as well as mental mechanisms, the psychologist the meaning and value of psychological tests, their use and abuse. Opportunity is afforded the psychiatric social worker to enhance the student's knowledge of community resources, of social welfare laws, as well as family, social, economic, and other environmental factors which may be important to the physician's understanding of the patient and his family. The medical student's interest and enthusiasm has been a source of gratification to us all, particularly during the senior year, when the student spends most of his time in the outpatient services of the hospital. As they rotate through the children's outpatient clinics, the experience of the junior year is applied in a most encouraging manner.

Fellows in psychiatry and pediatrics have first-hand experience in working with children presenting difficult problems of adjustment. Opportunities to deal with patients and parents has made possible the development of diagnostic and therapeutic skills. Likewise, opportunity is provided to work collaboratively with others, including cooperative work with other agencies such as the school, court, and social agencies.

The urgent need for psychiatric hospitals for children is apparent. In all probability, the inpatient psychiatric service for children in a teaching hospital will ultimately become an important training center for the personnel needed.

A weekly inservice training seminar is conducted with the nurses, occupational therapists, and the school teacher throughout the school year.

The interagency conferences are regarded as an important part of our over-all teaching efforts, as well as of our service function. These serve to extend our teaching efforts on a broader base. Visiting teachers, social workers, ministers, judges, welfare workers, physicians, and many others attend them. It is our hope that they will enrich the efforts of all interested in the understanding and management of children who have difficulty in their life adjustment.

Central to our efforts, however, is the physician, who is and always must be the pivotal center, if an effective program of preventive mental health services is to be evolved.

RESEARCH

As can be appreciated, our research efforts to date have, of necessity, been limited. Research has not been neglected, however, since several projects are under way. We are presently engaged in an evaluation of the first 200 admissions to our service. While this is not yet completed, we have been heartened in the response of the parents, who submitted an 85% usable return to our inquiry. Encouraging is the fact that a large majority of the parents regarded the hospital study as helpful to them and their children. Analysis of the returns indicates that over 50% of the patients studied have shown continued improvement in their adjustment in their homes, schools, and communities. Of the 33 children who were found to be mentally deficient, 23 continue to live in their homes, while 8 have been placed. Our study also reveals that approximately 40% of the routine EEG's were abnormal, which is a significantly higher incidence than that in the general population.

CONCLUSIONS

Careful review of our experience to date leads us to conclude:

1. An inpatient psychiatric service for children in a teaching hospital, which provides care for a small group of children with behavior disturbances, serves usefully in the teaching program. Likewise, it eases the demands on the other inpatient services, as well as relieves them in case of need.

2. It should be modest in size—preferably 20 beds.

3. Ideally, the maximum age range should not extend beyond 14 years with some flexibility permitted in the individual case.

4. Sex ratio to be expected is 2 males to 1 female.

5. Expected ratio of staff to patient is approximately one to one for each 8-hour period during the day. Staff personnel should include nurses, nurses' aides, psychiatric attendants, occupational therapists, and a school teacher well-trained in remedial teaching methods.

6. If selected with care, children of all ages can be admitted. It has been noted that problems of management are eased when there is a dispersion in age range of the patients.

7. For effective operation, ample space is required for adequate program planning and management.

8. Good interdepartmental relations with all other departments, but more particularly with pediatrics and psychiatry, are essential.

9. It is rarely advisable to arrange a direct admission from the juvenile court, since both patient and family then tend to identify the hospital unfavorably with the court.

10. Admission of hostile, "acting out" aggressive adolescent delinquents is rarely feasible for obvious reasons.

11. Continuous attention to the improving and strengthening of staff integration is essential for smooth and effective operations.

12. A small, adequately staffed outpatient service is an essential complementary unit to the inpatient service, in order to provide adequate screening of patients, to provide follow-up treatment for some inpatients upon discharge from the hospital, and an ample supply of case material for teaching and research purposes. It should not be expected to provide comprehensive service to local communities.

FURTHER REPORT ON EXPERIMENTAL EVALUATION OF MENTAL HYGIENE TECHNIQUES IN SCHOOL AND COMMUNITY [1, 2]

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INTRODUCTION

The mental health workshop is one of the keystones in preventive psychiatry. We believe that a careful study of the mental health workshop is certainly indicated if one is to utilize this instrument ideally. In an earlier report (1) we did a preliminary study of a controlled mental health workshop in a public school system. A group of 38 teachers volunteered for a workshop and a group of 19 administrators were required to take a second similar workshop under an analytically trained psychiatrist for a 15-week period in 1½-hour sessions given once weekly. The purpose was to determine whether or not participation in such a workshop would significantly change the viewpoints or attitudes of the participants. These 2 groups were matched carefully with 2 control groups as to age, sex, duration of service, grade taught, or position held, and the 4 groups were exposed to a battery of psychological tests at the beginning and at the end of this 15-week period. The test responses were then analyzed, and we found that although there were statistically significant changes in understanding of mental health principles for the experimental group, these were also found in the control group. It was noted that if the pre- and posttesting of the experimental groups were evaluated without control groups the results could have been interpreted as excellent.

We have studied and are here reporting 3 additional workshop groups and 3 control groups. The psychological test battery was partially altered in an effort to obtain more sharply defined responses.

OUTLINE OF EXPERIMENT

Teacher and parent-teacher groups in 4 communities in Westchester County, New York, were organized. In one community 2 workshops were set up for teachers, one headed by an analytically trained psychiatrist and the other by a dynamically oriented psychologist. The workshops were carried on simultaneously. There were 1½-hour sessions once a week for 15 weeks. These 2 groups were controlled by a teacher group from another community. This control group was tested at the same time as the other 2, and the controls were told that they were taking the tests to validate the tests' efficacy. Nothing was said about controls.

A third workshop group, headed by an analytically trained psychiatrist, was organized for parents in another community. These sessions were of 2 hours' duration and ran for 10 weeks. From the same community we obtained a control group of parents, who were told that they were being used as controls for the preceding group. A third parent-teacher group was organized in another community for control purposes, and this group was told that they were taking the tests to help us validate them.[6]

No names were used for any of the participants. Each person was given a number which was used in the pre- and the posttesting. The 6 groups of papers were then turned over to the psychologists for scoring and statistical evaluation.

All groups were given a battery of psychological tests at the beginning and end of the workshop period (Tables 1 and 2). The testing instruments were: (1) the Sacks Sentence Completion Test (5); (2) the Min-

[1] Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

[2] Aided by a grant from the Westchester County Mental Hygiene Association.

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[6] This group was broken down into separate teacher (Control C) and parent (Control D) units in the statistical analysis of test data.

TABLE 1

NUMBER OF PARTICIPANTS COMPLETING BOTH PRECOURSE AND POSTCOURSE TESTS

	Minnesota					SCT	USCS
	I	II	III	IV	V		
Control A, parents	25	25	22	25	25	25	24
Control B, teachers	59	59	53	58	56	57	55
Control C, teachers	8	8	7	8	8	7	7
Control D, parents	20	20	16	20	19	18	20
Experimental A	12	12	11	12	12	13	12
Experimental B	20	20	18	20	20	17	19
Experimental C	11	11	6	7	4	9	8
Total	155	155	133	150	144	146	145

TABLE 2

TEST FOR SIGNIFICANCE OF DIFFERENCE (FISCHER "t") BETWEEN "PRE" AND "POST" MEANS ON THE MINNESOTA PERSONALITY SCALE

	Parent (Exp. A)	Teacher (Exp. B)	Teacher (Exp. C)	Parent (Con. A)	Teacher (Con. B)	Teacher (Con. C)	Parent (Con. D)
Part I (morale)							
M(1)	181.58	184.30	180.81	190.64	182.56	181.50	176.50
M(2)	183.25	187.50	183.00	189.64	181.86	181.00	175.20
t	.55	1.36	.68	.62	.53	.12	.63
Sig.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
F	—	—	—	—	—	—	—
Part II (soc. adj.)							
M(1)	216.33	233.00	212.63	229.40	235.20	225.88	218.80
M(2)	225.41	221.70	223.63	231.12	237.02	222.00	221.90
t	1.99	.43	2.98	.89	.86	1.21	.95
Sig.	.10	N.S.	.02-.01	N.S.	N.S.	N.S.	N.S.
F	N.S.	—	N.S.	—	—	—	—
Part III (fam. rel.)							
M(1)	127.36	141.00	134.33	149.90	145.15	141.85	137.19
M(2)	135.00	144.94	135.66	149.14	147.13	141.85	141.06
t	2.12	1.47	.28	.35	1.33	.42	1.58
Sig.	.10-.05	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
F	N.S.	—	—	—	—	—	—
Part IV (emotionality)							
M(1)	160.41	162.25	165.57	168.08	166.45	172.00	167.90
M(2)	163.25	169.60	170.28	168.52	170.19	174.62	166.05
t	1.23	2.40	1.02	.33	2.60	.82	.68
Sig.	N.S.	.05-.02	N.S.	N.S.	.02-.01	N.S.	N.S.
F	—	N.S.	—	—	N.S.	—	—
Part V (ec. conservatism)							
M(1)	103.00	106.55	104.00	107.04	104.12	95.50	93.95
M(2)	102.66	106.65	102.75	106.68	103.79	95.12	93.74
t	.17	.07	.41	.34	.39	.18	.09
Sig.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
F	—	—	—	—	—	—	—

Key: M(1): Mean for group "pre" condition.
M(2): Mean for group "post" condition.
t : Fischer's "t" for small groups.
Sig. : Level of confidence for t. (N.S.; "not significant").
F : Ratio of variances for test of homogeniety. A "not significant "F" indicates that the significant t is actually due to the difference between the means and is not an artifact caused by variances.

nesota Personality Scale; and (3) the University of Southern California Parent Attitude Survey(6) which was modified[7] for use with the teacher groups by substituting the word "Teacher" for "Parent" wherever necessary. The Sacks SCT consists of 60 incomplete sentences which were reduced to 54 by eliminating 4 items on sex adjustment. The value of the test might have been impaired in this setting had such "sensitive" items not been excluded. The remaining items tap the following areas: attitude toward mother, father, family unit, women, friends and acquaintances, superiors at work or school, people supervised, colleagues at work or school, toward own abilities, toward the past, the future, and toward goals. Also tapped are fears and guilt feelings. The items are randomly distributed in the test and the subject's answers are then transferred to an analysis sheet on which area groupings are made and then scored on a 2, 1, and 0 point adjustment basis. The final adjustment score is the sum of all ratings, with high scores pointing to conflicts and low scores indicating satisfactory adjustment. Sacks reports contingency ratings between .48 and .57 for the scale when psychologists and psychiatrists compared their data on a group of patients, using SCT evaluations against psychiatric findings. He states that this shows a high positive relationship with clinical material and compares very well with similar studies using a projective technique such as the Rorschach. The general nature of the workshop approach did not warrant a statistical analysis of separate areas of adjustment.

The Minnesota Personality Scale consists of 5 parts, as follows: (1) Morale, (2) Social Adjustment, (3) Family Relations, (4) Emotionality, and (5) Economic Conservatism. Reliability coefficients ranging from .91 to .95 for the 5 parts of the scale have been reported by the authors (100 men, 100 women). Both pre- and postcourse scales were machine-scored.

The University of Southern California Parent Attitude Survey (USCS) is based upon a survey of the literature on parent-child relationships for items that would successfully differentiate the parents of problem children from those of nonproblem children. An initial pool of 148 items was reduced to 85 items upon the basis of significance by the chi-square method, with retention of an item depending upon whether it differentiated the groups at the 5% level of confidence or better.

Three sub-groups of items were extracted by using the pooled judgments of psychologically sophisticated judges. These were; (1) *Dominant,* "a tendency on the part of the parent to put the child in a subordinate role, to take him into account quite fully but always as one who should conform completely to parental wishes under penalty of severe punishment"; (2) *Possessive,* "a tendency to baby a child, to emphasize unduly the affectional bonds between parent and child, to value highly the child's dependence upon the parent, and to restrict the child's activities to those which can be carried on in his own family group"; and (3) *Ignoring,* "a tendency on the part of the parent to disregard the child as an individual member of the family, to regard the "good" child as the one who demands the least parental time, and to disclaim responsibility for the child's behavior." In addition to these sub-scales, 10 unclassified items were retained. It was felt that such a scale, modified for use with teachers and retained in its original form for the parent groups would reflect attitudinal sets similar to those associated with authoritarian attitudes which McGee(4) found to have significant correlates with teacher's classroom behavior. Shoben(6) reports reliability coefficients of .95 for the total scale; .91 for Dominant; .90 for Possessive; and .85 for Ignoring. His validity coefficients run .769 for total scale; Dominant, .623; Possessive, .721; and Ignoring, .624. He concludes that "This permits the tentative interpretation that the Survey has some genuine relevance in the assessment of parent attitudes in relation to child adjustment." The higher the scale, the more "unfavorable" the rating.

ANALYSIS OF TEST FINDINGS

Preliminary Comments.—A few relevant comments concerning some aspects of the testing and the experiment as a whole should be emphasized.

[7] With the kind permission of the author.

(1) Control Group A was told it was a control group in order to test the hypothesis that this might have accounted for score increases in our previous experiment(1). Control Groups C, D, and B were told they were aiding in the validation of tests.

(2) The psychiatrists in charge of Experimental Group A (parents) minimized leader participation and maximized participative group experience by opening the initial session with a 15-minute presentation which was later reduced to between 3 and 5 minutes as an introduction to discussion of questions and criticisms anonymously submitted by the participants. This leader reports:

> I participated only to correct gross error, to prevent people from getting into obviously personal problems, and . . . to prevent one group member from discussing in a personal way the comments of other members.

Attrition was slight, with one man dropping out after the first session, another after the fifth or sixth, and a third attending only 5 scattered sessions for business reasons. Most of the women, as would be expected in a parent's group, attended practically all the sessions and everyone, "without exception," resented sacrificing 2 meetings for testing. It cannot be doubted that this attitude might have interfered with completion of the tests. However, in view of experimental data on Group *versus* Leader emphasis(2, 3), we would expect this group to show major changes, although only 8 discussion meetings were held.

(3) The Experimental workshop Group B (teachers) was offered for credit and attendance was taken, so that the attrition rate was very low. The psychiatrist reports:

> The general format of the early meetings was primarily didactic lecture with some discussion period. Later on, after the basic subjects had been covered, we used base presentation method and as much group discussion as was possible in discussing specific problems and practical management of problems.

This group appears to have been leader centered, with strong acceptance of the group leader because of his prestige in the community.

(4) The Experimental workshop Group C (teachers) was voluntary, was offered for credit, and attendance was taken. There was no attrition. This group was headed by a psychologist and was leader centered, with a brief period of didactic lecture, and the major portion of the time spent on discussion of schoolroom problems, normal personality development, and the meaning of behavioral deviance. Personal problems of the participants were not discussed at these sessions. There were 4 other psychologists as guest leaders, but the original psychologist remained as moderator. This group resented the time spent taking the pre- and posttests so that when the second set of psychological tests was administered many of them refused to participate. They did not want to be part of the experiment. As compared with Experimental Group B (teachers), this course was meant to be extensive rather than intensive and in this sense was in sharp contrast to the other group.

(5) An objection might be raised that in view of the differences in percentile norms on the Minnesota for men and women all scores on this test should have been treated separately. Our findings show that there were no significant differences between the means for the male and female groups on the various subtests, that there were no significant differences between the variances (F) of the sexes, and that therefore the raw scores for the male and female groups, being from a common population, could be pooled. It is interesting to note that percentile equivalents for the total mean score for all groups when compared with norms for men and women (precourse test) show superior morale (85th percentile, 75th percentile); average social adjustment (50th percentile, 45th percentile); average family relations for male norms (52nd percentile) and somewhat inferior adjustment for female norms (35th percentile); between average and high average ratings on emotionality (67th percentile, 50th percentile); and a trend toward economic liberalism for both norms (40th percentile, 42nd percentile).

(6) Control Group A, which had been told it was a control group, maintained significantly higher scores on the tests than did Control Groups C and D, both of which were under the supervision of the same psychiatrist as was Control Group A. Groups C and D came from a different community, which might reflect community dif-

ferences. Differences were quite marked for Morale in favor of Group A, raising the question as to whether a true community difference or knowledge that it was a control group accounts for this. It is also very significant that the "validating" Control Groups, C and D, both show a very significant liberalism in their attitudes toward current economic and industrial problems (15th percentile on male and female norms), while Control Group A, with its higher "morale," is definitely oriented toward a more conservative viewpoint (60th to 65th percentile for both norms). This finding has interesting implications for social psychiatry and might be explained by the fact that there has been a great influx of population into the larger C-D community from the city; whereas higher property values and size tend to restrict any marked infiltration into community A by middle- and upper middle-class income groups. In any case, Control Group A shows no significant change in parental attitudes between initial and terminal testing (t .56) whereas Group D alters significantly in a more permissive direction (t 2.91, .01 percentile levels).

The Groups.—There were originally 181 participants in the total experimental-control group which was reduced to a total of 155 who had completed the pre- and postcourse tests at least to the extent that one subscale had been completed at both times. Participants were excluded from the statistical analysis when they had failed to take both the precourse and postcourse test or when so many items had been omitted from a subscale as to invalidate the measure and exclude machine scoring. In some cases, whether because of the nature of the content (*e.g.*, the Family Relations scale), through inadvertence, or as a result of faulty test administration, an entire subscale was omitted. The figures for Experimental Group C would suggest the operation of a motivational factor so far as group cooperation is concerned. On the other hand, it is important to note that there are *no significant differences* between changes produced in the groups under supervision of a psychiatrist (Experimental B) or a psychologist (Experimental C) when the means of all pre- and postcourse test scores are computed.

Test Results. There were no significant changes for Morale in any of the groups, but it is interesting to compare the 1953-1954 means with the present ones in order to account for significant changes for a teacher control and an administrative experimental group at that time. The data show that the prescores for Morale at that time were relatively low, while the postscores compare favorably with the prescores of the present groups. Perhaps the present social and economic climate is more conducive to morale in general or perhaps the score differences are due to differences in the communities themselves.

Two experimental groups (Groups A and C) show positive changes for social adjustment while none of the control groups do so. Experimental Group A, however, shows only a trend toward change, while that for Experimental Group C is statistically significant.

Experimental Group A shows a trend toward significance in the area of family relations. Since this is a parent group it is interesting to note that the initial mean score for friendly and happy parent-child relations is far below the means for all other experimental and control groups. It can be hypothesized that parents who volunteer for a mental hygiene workshop are likely to be a "selected" group in the sense that an awareness of parent-child conflicts might be motivating them. Attendance in this group was constant; and there were only 8 sessions; and didactic presentations were avoided. These are possible reasons for the trend toward significance found in this area.

Significant change toward improved emotional stability and self-possession is noted for Experimental Group B (teacher) and for Control Group B (teacher). We have no way of accounting for the change in the control group.

Finally, no significant changes were found for Economic Conservatism and the very small t's[8] suggest that the workshops have virtually no influence upon attitudes in this area. It is also likely that such attitudes are least amenable to change because they are

[8] "t" is the critical ratio; that is, the difference between the means divided by the standard deviation of the differences.

so deeply entrenched in the character of the individual. The implications of the scores have already been discussed.

Table 3 gives the significances between means for the Sentence Completion Test and the California Parent Attitude Survey. There is a *trend* toward significance for the Teacher Control Group B which was also noted for improved emotionality on the Minnesota Scale. We have no way of knowing what factors might have influenced these changes.

It could have been hypothesized that changes in attitude toward children should result from workshop activities. Our finding show there is a *trend* toward more liberalism for Experimental Group A (parents) and significant changes toward a more permissive attitude on the part of both Teacher Experimental Groups (B and C). Only one Control Group of parents (D) shows a significant change toward liberalism. This might be explained by the examiner's comment following administration of this test to the effect that several members of the group had told him that the test had "made them think." It is interesting to conjecture whether administration of a parental attitude scale generates constructive soul-searching, more reading, and consequent change to a more permissive attitude toward children. In any event, the superiority of the experimental groups over the controls is quite conclusive and suggests that the workshop activity might be responsible for the change. This is confirmed when the *percentage* of all experimental groups showing "pre-post" differences significant at the .10% level is compared for significance with the percentage of all control groups showing similar differences, disregarding tests and sub-tests. Fischer's "little z,"[9] based upon 31% of experimental groups showing differences and 12% of control groups doing likewise, gives a value of 1.58, significant at the 5.7% level of confidence.[10]

A similar analysis of changes in the Parent *versus* the Teacher groups indicates that the Parents showed greater over-all changes than did the Teachers. When the experimental group is compared with the control group, the Parents show greater over-all changes under experimental conditions than do the Teachers as compared with changes under control conditions. Whether this indicates that Parents have a deeper emotional investment in the child than do Teachers, and are consequently better motivated toward positive changes can be advanced only as an hypothesis.

It is interesting to observe in Table 4 that while our groups do not approach what psychologists would regard as the "ideal" par-

[9] A criterion for testing the significance of the difference between 2 independent variances (in this instance proportioned specifically)—a method of statistical inference.

[10] Point of confidence for z (one-tailed test—based on the hypothesis that differences will be in a positive direction only, experimental greater than control). It should be noted that all percentages were corrected for continuity, which means that the point of significance is actually somewhat higher than it should be.

TABLE 3

TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN "PRE" AND "POST" MEANS ON THE SCT AND USCS

	Parent (Exp. A)	Teacher (Exp. B)	Teacher (Exp. C)	Parent (Con. A)	Teacher (Con. B)	Teacher (Con. C)	Parent (Con. D)
SCT							
M(1)	5.77	3.23	2.44	3.76	4.39	3.43	5.55
M(2)	4.46	3.64	3.77	4.52	3.21	4.00	7.06
t	1.44	.55	1.39	1.69	1.80	.64	1.54
Sig.	N.S.	N.S.	N.S.	N.S.	.10	N.S.	N.S.
F	—	—	—	—	>.10%	—	—
USCS							
M(1)	326.00	334.78	333.37	320.41	333.73	322.00	323.90
M(2)	317.08	326.52	320.00	323.41	327.94	322.43	313.00
t	1.79	2.66	2.41	.56	1.24	.08	2.91
Sig.	.10	.02	.05	N.S.	N.S.	N.S.	.01
F	N.S.	N.S.	N.S.	—	—	—	N.S.

TABLE 4

COMPARISON OF USCS TOTAL SCALE MEANS OF EXPERIMENTAL AND CONTROL GROUPS WITH VALIDATING GROUPS

	Mean score	M(1)	M(2)
"Ideal scores" of clinical psychologists (N-8)...	286.38	—	—
Problem parent group (N-20)	399.83	—	—
Non-problem parent group (N-20)	350.01	—	—
Total experimental group.	—	331.38	321.20
Total control group.....	—	325.01	321.67
Both groups combined...	—	327.74	321.48

ent, they are significantly more permissive than either of the validating groups.

SUMMARY AND CONCLUSIONS

A further study on experimental evaluation of controlled mental hygiene workshops in school and community is reported. This controlled study was made on mental health workshop groups of teachers and parents and controlled by other groups of teachers and parents from the same and other communities. These studies were all made in Westchester County, New York State. Psychological test instruments were used before and after the mental health workshops for both the experimental and control groups, all groups being tested simultaneously. The scoring and statistical analysis of over 110,000 test items lead to the following conclusions:

1. The experimental groups as a whole showed more changes in a positive direction than did the control groups.

2. There was a significant trend for parents in the experimental groups to show greater over-all changes than did the teachers as compared with changes in the control groups.

3. In spite of the differences in content, approach, and instructions to the experimental groups, there were no statistically significant differences between changes produced in the groups by a psychiatrist and a psychologist.

4. The most striking positive changes were obtained on the Parental Survey Scale for all the experimental groups, with 2 groups showing a conclusive change toward a more liberal conception of parent-child relationships and 1 a trend toward change (6).

5. Telling a control group that it is being used as a control seems to raise subscale scores on the Minnesota. Whether this would hold in general or whether a community factor is operating is uncertain.

6. There were no changes in Morale for any of the groups, suggesting that the morale "climate" at the time of this experiment is better than it was at the time of previous experiment or that community differences were being reflected.

7. One control group showed a significant change in parental attitudes. It is suggested that this might have resulted from the stimulus value of the Scale.

8. It is probable that the workshop is better suited for those who volunteer to participate rather than for an unselected random population.

9. It seems advisable to stress attitude evaluation in future studies rather than "adjustment." This might make it possible to administer a shorter test battery and to accomplish a more detailed item analysis of the responses.

ACKNOWLEDGMENT

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SOME HYPOTHESES CONCERNING THE ROLE OF SYMPATHOMIMETIC AMINES IN PSYCHIATRIC CONDITIONS[1]

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Since the report of Cannon(1) there has been considerable interest in the role of the sympathetic nervous system in emotional reactions. It was postulated that the sympathetic system geared the organism either for fight or flight. Recently Diethelm and his associates tested the blood of patients in various emotional states and tried to identify specific substances as factors in these states. Certain of their findings indicated that more than one substance is involved(2). In tests on the blood of patients with anxiety, an unknown adrenergic agent was found. Pharmacologic tests with this unknown suggested a resemblance to nor-epinephrine(3).

There are, however, difficulties in accepting nor-epinephrine as the principal chemical factor implicated in anxiety. Nor-epinephrine (Levophed, Arterenol) has been administered in large amounts to humans without any evidence that anxiety is produced. Moyer *et al.*(4) gave large amounts to normal subjects and to patients in severe shock. They state, "Side-effects to both subcutaneous and intravenous nor-epinephrine were minimal." Clinical experience suggests that nor-epinephrine is not the most important sympathomimetic amine in anxiety. One report suggests, in fact, that it is more appropriate to the fight than to the flight reaction(8).

Several years after Fleetwood's report(3), Lockett(5) described a third amine normally present in small amounts in the adrenal glands of several species, including man. This third amine was indistinguishable from isopropyl nor-epinephrine (Isuprel, isoproterenol) which had been synthesized earlier. Experiments in this laboratory(6) showed that although all 3 of the naturally occurring amines have similar qualitative actions on the heart, Isuprel[4] is far more potent than nor-epinephrine or epinephrine on the auricles of 4 mammalian species. In its ability to produce auricular tachycardia it ranged from 4 times the potency of nor-epinephrine in the guinea pig to 700,000 times the potency of nor-epinephrine in the rat. This unusual ability to produce auricular tachycardia, a common somatic feature of anxiety, led to the hypothesis that Isuprel may be a major chemical mediator in anxiety. This hypothesis was reinforced by observations made independently by one of us (L.C.) upon himself. In studying another aspect of Isuprel action, and without any thought at the time of the possible role of Isuprel in anxiety, he administered to himself, subcutaneously, increasing doses of Isuprel and recorded his reactions. This report will deal only with reactions related to anxiety.

When Isuprel in amounts between 10^{-11} mg. and 10^{-6} mg. was injected subcutaneously, only local reactions at the injection site were observed. With a dose of 10^{-5} mg., there was a subjective feeling of enhanced alertness, increase in pulse rate, and slight fall in blood pressure. With a dose of 10^{-3} mg. of Isuprel there were also feelings of vague uneasiness and concern. With a dose of 10^{-2} mg. a feeling state of anxiety developed within 2 minutes. The subject wandered about the room aimlessly and restlessly. His face turned pale, his hands cold, and an eyelid tremor was seen. The blood pressure fell, the pulse rose, auricular premature contractions appeared, and there was a heightened awareness of heart beat. The cardiac symptoms followed the development of the subjective feelings of anxiety. An experienced investigator present stated that the appearance of the subject was frightening.

These observations, supporting our origi-

[1] This investigation was supported in part by a research grant (H1016(C)) from the National Heart Institute, Bethesda, Md. and in part by a grant from the New York Heart Association.

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[4] The Isuprel used was generously supplied by the Winthrop Co.

nal hypothesis, led to further search for evidence of Isuprel action in man. A colleague who is an experienced full-time investigator had been taking various medications for asthma. He was asked about his experiences with Isuprel. He stated that he had tried doses of 10 mg. sublingually.[5] He found that there was some relief from the bronchospasm, but because of undesirable side-effects he had discontinued the drug. The side-effects were described as tachycardia, jitteriness, tension, tremor, and "anxiety." He volunteered the information that for an equivalent amount of bronchodilatation, there was far more anxiety produced by Isuprel than by epinephrine. Because of this, he preferred to take epinephrine even though it required subcutaneous injection.

A search of the literature revealed only one report of subjective symptoms produced by Isuprel. As part of a study of the effects of certain drugs on the biliary tract of man, Gaensler and McGowan(7) found, after injection of Isuprel, that in addition to tachycardia, "Subjective complaints of palpitation, throbbing sensations in the chest and neck, tremors and dizziness were often accompanied by alarming anxiety."

Elmadjian *et al.*(8) examined the urine of normal persons and psychiatric patients, measuring the amounts of epinephrine and nor-epinephrine present in each. They found increased excretion of nor-epinephrine in aggressive-hostile patients and increased excretion of epinephrine in passive-fearful ones. They did not report on Isuprel concentrations but it is unlikely that any presently available chemical procedure would be sufficiently sensitive to measure Isuprel in blood and urine. This amine is so powerful that concentrations 1/100 as great as nor-epinephrine or epinephrine would have dramatic activity but would be too small for chemical detection.

All these findings suggest the following hypothesis concerning the relationship of the sympathomimetic amines to emotional states:

1. Isuprel, or a similar substance, may be an important chemical mediator in anxiety. Its presence in the circulation promotes the establishment of a pattern of activity that is commonly interpreted as the feeling state of anxiety. In addition, Isuprel produces a group of physiological changes (tachycardia, premature contractions, fall in blood pressure, cold hands, facial pallor) frequently present in the acute anxiety state. In the naturally occurring reactions to threat, however, the response is rarely one of fight or flight alone. More frequently, the two occur together with one more dominant than the other. Thus, the blood pressure fall resulting from Isuprel may be modified by the blood pressure rise resulting from other mechanisms such as reflex changes, epinephrine, or nor-epinephrine.

2. Another amine may be an important chemical mediator in aggression and hostility. Possibly it is nor-epinephrine(8) although our experiments shed no light on this.

3. Epinephrine has certain actions in common with both but in the balance may be a relatively weak mediator in anxiety.

There has been increasing interest in the possibility that some chemical mediator may also be involved in various psychotic states. Much interest has centered around serotonin. On the other hand, there has been little attention given to the possibility that sympathomimetic amines may produce some of the important manifestations of psychotic behavior. Many of the signs and symptoms of psychoses differ considerably from the known effects of sympathomimetic amines. Depression is an example. However, some pharmacologic observations described below suggest that combinations of the amines may possess actions, differing from, and even opposite to those shown by the individual amines.

The experiments were performed on auricle preparations from several species. The pharmacologic significance of the findings will be reported elsewhere.

The method used was that reported earlier (6). Many preparations were studied, with similar results in each. Nor-epinephrine alone in a concentration of 10^{-4} mg. per cc. produced a marked increase in the rate and force of the auricle. After the nor-epinephrine was washed out of the bath and the prepara-

[5] Isuprel is given sublingually in relatively enormous amounts because of its poor absorption. Because of individual variations in absorption, this route is not ordinarily suitable for investigations.

tion returned to its control state, Isuprel was added to produce a concentration of 10^{-6} mg. per cc. and a similar increase in rate and force resulted. The Isuprel was then washed out and, after a suitable waiting period, a mixture of the two amines was added to produce final concentrations of nor-epinephrine and Isuprel, each equal to that used with each amine separately. This mixture produced an immediate and sustained depression of both rate and force. When additional nor-epinephrine or Isuprel was added without washing out the depressant mixture, there were only minimal increases in rate and force. However, when either of these amines was added after the depressant mixtures had been removed, it produced an increase in rate and force similar to that seen in the initial control tests. In order to be certain that the depression of function observed with the mixture was not simply the result of excessive dosage, all amines were washed out and then epinephrine added to produce a level of 10^{-3} mg. per cc., 10 times the earlier concentration. The result was a great increase in rate and force. Similarly, a tenfold increase in Isuprel concentration produced a great increase in rate and force. Thus it is clear that the depression of function seen after the mixture of nor-epinephrine and Isuprel is due to the mixture of the two amines, not simply to excessive total quantity of amines. Note that the mixtures used contain approximately *equipotent*, but not equimolar, concentrations of the amines because of the greater potency of Isuprel. Thus, if Isuprel is 100 times more potent than nor-epinephrine in its cardiac effects in a particular species, an equipotent mixture contains 1 part of Isuprel to 100 parts of nor-epinephrine. Since the potency ratio of Isuprel to nor-epinephrine varies according to species and type of tissue, the ratio of each amine in an equipotent mixture may vary.

This series of observations suggests a hypothesis concerning the possible role of the sympathomimetic amines in depressed states. Based on the hypotheses stated above, that Isuprel or a similar substance may be an important chemical mediator in anxiety, and that another sympathomimetic amine may be an important mediator in hostility and aggression, we may add the hypothesis that a depressed state results when a patient experiences approximately equal quantities of hostility and anxiety, so that equipotent concentrations of the other amine and Isuprel are liberated.

The testing of these hypotheses can be done only in humans, and since we do not have the necessary facilities we hope that others to whom such facilities are available will be interested in testing them. Great caution should be used in administration of the amines because of their potency and the wide variations in individual sensitivity. It would be hazardous to start with a total subcutaneous dose of Isuprel greater than 10^{-5} mg. The dose may then be increased cautiously. Nor-epinephrine has been widely used clinically under the trade name "Levophed" and the usual precautions, including constant blood pressure monitoring and the avoidance of subcutaneous or intramuscular injection, should be observed. Chemical tests of Isuprel in the blood and urine will probably not be sensitive enough to measure the small concentrations of this amine which can produce such profound effects. However, the possibility of bioassay with a sensitive preparation cannot be ruled out.

If our hypotheses are correct, Isuprel in amounts ranging from 10^{-5} to 10^{-3} mg. would produce marked anxiety in normal persons; another amine, or a combination would produce feelings of hostility or aggression in normal persons; and equipotent mixtures of the 2 amines would result in some form of depression. In psychotic patients with depressed features, however, the effects of the amines singly would be much less, since the agents would already be present in the circulation in abnormal amounts.

Summary

The following hypotheses are suggested concerning the possible roles of sympathomimetic amines in psychiatric conditions:

1. Isuprel, or a similar substance, may be an important chemical mediator in anxiety.

2. Another amine, possibly nor-epinephrine, may be an important chemical mediator in aggression and hostility.

3. When a patient experiences approximately equal quantities of hostility and anxiety, equipotent concentrations of Isuprel and the other amine may be liberated, producing depression, by a mechanism similar to that whereby a mixture of 2 amines depresses the isolated mammalian auricle, although either amine alone has a stimulant action.

An additional possibility suggested by continuing studies in this field is that the depression of rate and force observed with the mixture of amines is produced by an intermediate metabolite, formed within 1 or 2 minutes.

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CLINICAL NOTES

DEPRESSION TREATED WITH CHLORPROMAZINE AND PROMETHAZINE

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Reserpine and chlorpromazine have been singularly successful in the treatment of psychoses, especially schizophrenia. However, the symptom of depression has often been very resistant to drug therapy. In our experience chlorpromazine has been more effective in depression than reserpine or combined reserpine-chlorpromazine. Moreover, in a previous paper we reported that promethazine hydrochloride seemed to increase the therapeutic effectiveness of chlorpromazine. In this study we analyze the effectiveness of chlorpromazine combined with promethazine[2] in the treatment of depressions.

Forty female psychotic patients were selected in whom depression was a prominent symptom. Sixteen were diagnosed as schizophrenic, 7 were cases of manic-depressive psychosis, mixed type, 8 involutional psychosis, melancholia, 7 involutional psychosis, mixed type, 1 psychosis with cerebral arteriosclerosis, and 1 senile psychosis, depressed type. Their ages ranged from 23 to 69, and the duration of their present hospitalization was from 1 to 14 years. Twenty-four patients had previously received electroconvulsive treatments with no lasting benefit.

The dose of promethazine was 12.5 mg. orally twice a day. The dose of chlorpromazine was individualized for each patient. It was found that if the chlorpromazine was allowed to retard the patient considerably, the depression would sometimes become aggravated. Therefore, the dose of chlorpromazine was kept as low as possible; the dosage ranged from 25 mg. to 100 mg. q.i.d. The patients were treated from 3 to 12 months.

The results of treatment with chlorpromazine and promethazine were as follows: of the 16 schizophrenic patients in whom depression was a prominent symptom, 5 were markedly improved, that is, were discharged from the hospital; 4 were moderately improved; 5 slightly improved; and 2 were unimproved. Of the 7 manic-depressive patients 4 were markedly improved; 2 moderately improved, and 1 slightly improved. Of the 8 patients suffering from involutional psychosis, melancholia, 2 were markedly improved; 3 moderately improved, 2 slightly improved, and 1 unimproved. Of the 7 patients with involutional psychosis, mixed type, 3 were markedly improved; 2 moderately improved, and 2 slightly improved. The patient diagnosed as psychosis with cerebral arteriosclerosis was moderately improved, and the patient with senile psychosis, depressed type was also moderately improved. Therefore, of the total of 40 depressed patients 14 (35%) were markedly improved and have been released from the hospital; 13 (32.5%) were moderately improved; 10 (25%) were slightly improved; and 3 (7.5%) were unimproved. Of the 14 markedly improved patients, 8 had previously received electroconvulsive treatments without lasting benefit.

Although there were both agitated and retarded depressions in this study, the agitated depressions seemed to respond better to treatment. All of the markedly improved patients were released from the hospital on a maintenance dose of chlorpromazine alone, 25-50 mg. 3 or 4 times a day, the promethazine having been discontinued before the patients left the hospital. The released patients were then checked monthly by our outpatient department.

In summary; of the 40 depressed psychotic

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[2] The promethazine hydrochloride was supplied by Wyeth Laboratories under the name of Phenergan. The chlorpromazine was supplied by Smith, Kline & French Laboratories under the name of Thorazine.

patients treated with chlorpromazine and promethazine, 35% were markedly improved and were released from the hospital. The agitated depressions seemed to respond better to treatment than the retarded depressions.

UNTOWARD REACTIONS TO TRANQUILIZING DRUGS

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In the course of treating some 250 mentally retarded patients with tranquilizing drugs, we have had several untoward reactions which we believe are of sufficient importance to warrant immediate publication.

A 15-year-old, generally healthy and active male, mentally deficient since encephalitis at 15 months of age, and functioning at idiot intelligence level, had been on reserpine 1.0 mgm. t.i.d. for 3 weeks. He was being followed carefully by nursing personnel, with daily checks of pulse rate and general condition. On the day of his demise, after lunch (which he ate with good appetite) he evidently took a nap in the play yard, and when checked an hour or so later by nursing personnel, was found to be dead. Autopsy revealed interstitial pneumonitis as the apparent cause of death.

A 28-year-old, vigorous and active male, mentally deficient because of a nonspecific malformation of the brain, possibly associated with genetic factors, and functioning at the lower moron level of intelligence, was on reserpine 2.0 mgm. b.i.d. for over a year because of an aggressive, impulsive, destructive behavior disorder, with gradual significant improvement. On the day of death, while eating lunch, he evidently aspirated a bolus of food, and despite his own choking and the efforts of nursing personnel and a physician who was summoned directly, his airway could not be re-established, and he died. Autopsy revealed diffuse and extensive pneumonitis despite the fact that the patient had been seen by the ward physician two hours earlier and had shown no evidence of illness.

A 30-year-old, white female, severely mentally retarded (idiot level of intelligence) because of nonspecific malformation of the brain, and previously in generally good health although somewhat unsteady, had been receiving reserpine 3.0 mgm. b.i.d. for 9 days, and a smaller dosage for 6 weeks before. At lunch on the day of death, she took either a bite of food (soft diet) or drink of fluid, and began to choke. Attempts on the part of nursing personnel to remove a foreign body or to clear the airway otherwise were unsuccessful as was artificial respiration, and the patient died. The psychiatric technician in charge indicated that pulse was absent when checked about a minute after she started choking and indicated that the patient did not struggle for air as would be expected, even from a severely retarded patient. Autopsy revealed patches of bronchitis surrounded by areas of bronchopneumonia, and the cause of death was listed as asphyxia due to laryngospasm due to aspiration of water. It should be noted that mentally deficient individuals do not choke on food any more frequently than do normal individuals, nor is such choking any more frequently followed by death than in normal individuals unless there are other associated defects such as cerebral palsy, which was not the case in these 2 patients above.

In addition to these 3 cases in which death occurred, 4 others (2 on reserpine in doses of 1.0 mgm. daily and 3.0 mgm. b.i.d., and 2 on chlorpromazine in doses of 200 mgm. t.i.d. and 100 mgm. t.i.d.) were found to have extensive bronchopneumonia without having shown the usual premonitory signs and symptoms. They were hospitalized, treated with penicillin and streptomycin, as well as oxygen in one case, and recovered. All 4 showed less subjective complaint than would be expected. On admission to the acute hospital with advanced pneumonias, 3 of the patients were afebrile, and the fourth showed a temperature of 101.6° rectally. While all had shown some degree of previous sedation from the drugs, none was a bed patient or was excessively sedated prior to the onset of the pneumonia.

We are certainly unable to attribute the above deaths and illnesses, with any degree of certainty, directly to the tranquilizing agents; however, these patients did not react to their illnesses in the manner we would have expected, and the only new factor present of which we are aware in the clinical picture was the tranquilizing agent. We raise the question of whether these agents may produce masking of both subjective complaints of intercurrent infectious illness and the characteristic somatic responses such as temperature elevation. Further, the question can be raised whether these agents may have a specific effect on the respiratory process, conducive to the development of pneumonia and possibly diminishing the usual defensive alarm reaction to blocking of the airway.

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CASE REPORTS

ACUTE CHLORPROMAZINE POISONING

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This paper reports a case of acute chlorpromazine poisoning and compares it with other cases in the literature.

Case History.—At 7:45 p.m. on June 6, 1956, an 18-year-old white female ingested between 50 and 100 chlorpromazine tablets, 100 mg. each, in a suicide attempt. When gavaging was performed 25 minutes later, despite the patient's violent resistance, orange particles were aspirated with a large amount of water and gastric juice. The patient went to sleep two hours after ingestion of the drug.

Vital signs remained unchanged throughout the night, with blood pressure 110/80, pulse 92, and respiration 24. The patient did not awaken when blood pressure was taken during the third and fourth hours,[2] but she could be aroused easily by more vigorous stimuli. Several hours later she voided in bed and mumbled incoherently when her linens were changed. By the twelfth hour there was a complete absence of deep reflexes and plantar responses. The patient moved her head away from deep pressure in the supra-orbital notch but made no other motor or verbal responses. Pupils were pinpoint. Blood pressure remained the same, but pulse rose to 110 and respiration became shallow and increased in rate to 32. Rectal temperature was 99.8°.

At the fifteenth hour the patient had a convulsion lasting 20 to 30 seconds, accompanied by a bowel movement. Blood pressure rose to 120/70 and pulse to 120, returning to the preconvulsion levels within 15 minutes. Neurological examination 15 minutes after the convulsion revealed no change. At the sixteenth hour there was a second convulsion lasting 20 seconds, followed by a third 95 minutes later. This last convulsion, the only one witnessed in its entirety by the attending physician, was initiated by a tonic stage with hypertension of the extremities, followed by generalized clonic movements of the extremities, the entire seizure lasting 30 seconds. Physical examination revealed no change except for a transitory rise in blood pressure and pulse as before.

Respiration remained shallow at 32 per minute, and the pulse rate advanced from 100 to 110 per minute from the twelfth to twenty-fourth hours. There was a rise in rectal temperature to 101°. By the twentieth hour the patient responded to pin prick stimuli by mumbling incoherently, but tendon reflexes remained absent. At the twenty-second hour she responded to shaking by awakening partially for about a minute, giving her name and address in a slurred voice when questioned. She then moaned loudly, said she was unable to talk, and lost consciousness again. Difficulty with conjugate gaze and skew deviation of the eyes were noted. Physical examination 24 hours following ingestion of the drug showed bilateral positive Babinski and slight triceps response on the right side, with all other reflexes absent. There were coarse rales in the right lower lung field. During the twenty-sixth hour the patient responded to questioning and was well oriented as to time, person, and place, but it required constant stimulation to keep her from going back to sleep. There was a fine tremor of the mouth and fingers, and she required assistance in opening her eyes.

From the twenty-fourth to forty-eighth hour the patient could be awakened easily by painful stimuli and would stay awake for periods which gradually increased from 5 to 30 minutes. Temperature, respiration and pulse remained at the elevated level reached at the end of the first day until about the thirty-sixth hour, when they gradually began to decline. The patient was able to take food orally for the first time during the forty-fourth hour. Deep reflexes were present at that time, but were of quite high threshold. They were equal bilaterally. Coarse rales remained in the lower lobe of the right lung. Speech remained slightly slurred, and the patient complained of blurred vision. Blood pressure was 110/64, temperature 98°, and respiration 24, at the end of the second day.

By the fifty-sixth hour the patient was asymptomatic, aside from a slight feeling of sleepiness. Speech was unimpaired and vision was no longer blurred. The tremors had disappeared. Reflexes were normally active and equal bilaterally.

The course of events detailed above are summarized in Table 1.

Special Studies.—An electrocardiogram taken during the thirty-sixth hour revealed auricular and ventricular rates of 115, PR interval of .12 seconds, and QRS interval of .08 seconds. These findings were unchanged when the test was repeated 3 days later, except for a decrease in pulse rate to 107 and an increase of the PR interval to .16 seconds.

Blood studies, which included CBC, FBS, BUN, CL, serum protein, AG ratio, alkaline phosphatase, thymol turbidity, and cephalin flocculation, were performed on June 8, 11, and 15. The only change of possible significance was a rise of alkaline phos-

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[2] Hours refer to the time elapsed since the drug was ingested.

TABLE 1

SUMMARY OF CASE

Hours following ingestion	Signs and symptoms
25 minutes	Struggles against gavaging
1¼	Sleep
6-8	Voids in bed; semicomatose
12	Coma; reflexes absent, increased pulse and respiration
15	Convulsion
16	Convulsion
18	Tonic and clonic convulsion
20	First response to painful stimuli
21½	Semicomatose
24	Reflexes begin to return
26-36	Awakens to stimuli; blurred vision, slurred speech, tremors; reflexes sluggish
40	Reflexes active; asymptomatic except for mild sleepiness

phatase from 5.7 on June 8 to 7.7 on June 11, returning to 5.6 by June 15. This may represent transient liver damage. There was also a mild leucocytosis and shift to the left, which had returned to normal 4 days later.

An EEG taken a half-hour following the first convulsion revealed repeated paroxysms of spike and slow waves with a duration of 1-2 seconds on a background pattern usually seen during the transition from drowsiness to light sleep. This patient had no history of previous seizures. However, a routine EEG performed a month earlier revealed anterior temporal and middle temporal random spikes bilaterally. This may have indicated a predisposition to seizures.

Treatment.—At the time of gavaging 1 cc. of caffeine and sodium benzoate and 5 mg. of benzedrine were administered intramuscularly. Another 5 mg. dose of benzedrine was given 4 hours later. No sedatives were used. When the patient became comatose the continuous administration of a 5% dextrose in water intravenous solution was begun by slow drip; an indwelling catheter was inserted and the intake and output carefully measured. Achromycin, 250 mg. q.i.d., was begun during the first day of treatment and continued for 5 days.

Other Reports.—A survey of the literature produced only 4 reports of similar cases; the report of a fifth case was unobtainable(1). The principal findings in these reports are summarized and compared with our case in Table 2. All cases were characterized by comatose states similar to the one described above, with onset as early as one-half hour after ingestion of the drug. In all cases coma was accompanied by muscular hypotonia and markedly diminished or absent reflexes. Two cases reported marked drops in blood pressure to the level of shock, one returning to normal level spontaneously, the other with the use of noradrenalin. In the first case, which reports chlorpromazine poisoning in a child, the patient lapsed in and out of a comatose state several times, with a phase characterized by twitching of hands, feet, and face occurring between two depressive stages. In 2 cases besides our own, shallow respiration occurred. Two instances of hypothermia are reported.

SUMMARY

The signs and symptoms of acute poisoning with chlorpromazine are similar to those reported for the antihistamines, to which it is chemically related. Poisoning is characterized most prominantly by central nervous system depression. In some cases there is also a phase of central nervous system stimulation with convulsions. Other prominent signs and symptoms may include marked hypotension to shock-like levels, tachycardia, tachypnea, hypothermia, diminished or absent reflexes, hypotonia, pinpoint pupils,

TABLE 2

COMPARISON WITH OTHER CASES

	Amount ingested	Duration of coma (hours)	Hypotension	Reflexes	Hypothermia	Pupils
21-month-old child(5)*	225 mg.	12	40/0	Absent	None	Pinpoint
Adult(6)*	750 mg.	12	90/55	Absent	96.F	Pinpoint
Adult(3)*	22.4 mg/kg.	5	Marked	Absent	None	?
Adult(4)*	1,000 mg. (+30 mg. phenobarbital)	24	None	Absent	Transient	?
This report	Over 5,000 mg.	24	None	Absent	None	Pinpoint

* Bibliographical reference.

stomatitis, blurred vision, and slurred speech. No permanent sequelae have been reported.

Treatment is primarily symptomatic. Because of the possibility of convulsions and postictal depression, the use of stimulant drugs is not recommended(2). Noradrenalin may be effectively used to counteract hypotension. Constant vigilance should be maintained to guard against respiratory failure, with artificial respiration the treatment of choice if failure should take place. A broad-spectrum antibiotic may be used to prevent secondary infection and intravenous fluids administered to maintain fluid balance.

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HISTORICAL NOTES

THE EARLY HISTORIANS OF PSYCHIATRY

ERNEST HARMS, PH. D.,[1] NEW YORK CITY

In 1955 German psychiatry with great emphasis celebrated the fiftieth anniversary of the death of B. Heinrich Laehr, who, during his 85-year lifetime, contributed considerably to the development of institutional methods in middle Europe. As early as 1850 Laehr had started a private mental institution, where, with characteristic definiteness and intensity, he began his experiments. Many later developments were based on his progressive institutional method. While Laehr is known mostly for this work, he made an equal and perhaps even greater contribution which has been almost entirely forgotten. In 1895, ten years before his death, Laehr published a large volume, *Die Literatur der Psychiatrie, Neurologie und Psychologie im 18. Jahrhundert*, a 2,000-page, 3-volume work covering the period from 1459 to 1799, listing 16,000 works by 8,500 authors. Summarizing all the most important material, this bibliography is, up to now, the most important contribution extant to the history of psychiatry. The reason it has been completely overlooked or ignored is a hard question for the historian to answer. Psychiatry itself has had a markedly contradictory development; anyone wishing to comprehend it either historically or genetically must cope with the different viewpoints of various writers. Strangely enough, these are unusually contradictory in this field dealing with mankind's mental ills. A just acknowledgment and evaluation of a man like Laehr can be achieved only through objectively viewing the early historical writings about psychiatry in the way I shall attempt here.

Until the seventeenth century most medical and other scientific authors used to refer to ancient authors or mythological and religious documents for their proof. These quotations are a main source for antique and early ideas on mental ailments and their cure. These documents are not completely valid as source material, however, because of much misquotation and, still more false interpretation. In searching through early medical literature one finds no trace of real psychiatric historical information before 1800. The earliest even limited historical summaries are given by the ingenious Kurt Sprengel in his *Versuch einer pragmatischen Geschichte der Arzeneikunde* (Attempt at a Pragmatic History of Medicine), published between 1801 and 1803. Here we find a few pages on neurology and the physiological aspects of psychiatry.

The first real history of psychiatry, however, is actually almost completely unknown, although its author, J. Ch. A. Heinroth, is considered not only one of the foremost early psychiatrists, but also one of the greatest humanists of all times. He ranks with Wilhelm von Humbolt in having written basic works in almost every field of the humanities, in addition to his famous 2-volume psychiatric work, published in 1818, *Lehrbuch der Stoerungen des Seelenlebens oder der Seelenstoerungen und ihrer Behandlung vom rationalen Standpunkt aus betrachtet* (Textbook of the Disturbances of the Psyche). Actually, this is the first large survey of previous psychiatric achievements. A chapter on earliest times is followed by the "Treatment of Psychic Disturbances according to the Writings of the Great Physicians of the Ancient World," including a detailed presentation of the Hippocratic writings. The next chapter treats the intermediary period between old and new, while the last division is devoted to modern times, and reports the various "national schools," as the author terms them. In his basic viewpoint Heinroth was the first symptomatologist in psychiatry; this is, of course, applied to the way he reports psychiatric history. He emphasizes that he does not believe psychopathology can be explained physiologically, as through autopsy. Heinroth therefore saw

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many early authors as mistaken, as a result of their searching the liver for causes of melancholia, instead of studying the actual psychological symptoms of the disease. He emphasizes that accordingly, psychiatry up to his own time had not developed clear somatic pictures or systematizations of the various forms of psychopathology. Studying psychiatric history was for him a search for symptoms. In an incomparably brilliant way Heinroth analyzed, for example, the Hippocratic writings, by dividing his presentation into (1) symptoms of the developing mental sickness; (2) symptoms of the sickness process; and (3) symptoms of cure. The further contents of his two volumes are based on this historical presentation; he repeatedly refers to material from those writers he considers his scientific ancestors.

In 1830, 12 years after Heinroth's textbook appeared, a book was published which is today still acknowledged to be the first real history of psychiatry. This book not only overshadowed the entire nineteenth century, but was considered so valid in even this century that major portions were translated by Smith Ely Jelliffe and published in a set of papers. The author was J. B. Friedreich; the title of his work: *Versuch einer Literaergeschichte der Pathologie und Therapie der psychischen Krankheiten* (Attempt at a History of the Literature of Pathology and Therapy of Psychic Illnesses). If one examines this book with Heinroth's history in mind, one makes the astonishing discovery that Friedreich's book is more or less a revised edition of Heinroth. Not only does Friedreich use the same structure and, in parts, the same contents, he also quotes Heinroth constantly—but only in order to reject and contradict the earlier writer. At a rough estimate the later volume is about one-third longer, but perhaps this is because of the rather small print in Heinroth's book. Additions in Friedreich's volume are mainly detailed résumés of fifteenth, sixteenth, and seventeenth century writers, in whose views Heinroth was less interested. Heinroth had called his a "history from the rational viewpoint," and, a pupil of Fichte, Hegel and Schelling, was strongly under the influence of the objective idealism of his time. He was head of the psychiatric department of his university but at the same time was a member of the philosophical and theological departments, and in addition to medicine taught anthropology, biology, philosophy and criminology. Heinroth was as much a medical man as he was a brilliant thinker and writer. Friedreich, on the other hand, wanted to be a member of the vanguard in natural science. Undoubtedly he started out brilliantly—at the age of 24 he taught on the medical faculty of Wuerzburg—but because he was seemingly a disagreeable radical and fanatic, after not more than 10 years he was demoted and given the job of court physician in a small Bavarian town. He made a short academic comeback at the secondary Bavarian university of Erlangen, but soon retired to devote himself to psychiatric writing, where his role was undisputed.

Six years after the large historical text had appeared (1836), Friedreich published another historical study. In this he openly targeted Heinroth as the major representative of the psychological school of psychiatry to which belong leading nineteenth-century workers like Carus, Reil and Neuman. Friedreich's book, *Historische-kritische Darstellung der Theorien ueber das Wesen und den Sitz der psychischen Krankheiten* (Historical Critical Presentation of the Theory and the Location of the Psychic Diseases), is a lengthy and rather ironical presentation of psychological psychiatry. He calls Heinroth's concepts "a psychiatric comedy of the devil," which he "hopes will be the last of its kind." Friedreich tries to establish what he calls the "Somatical Theory of Psychiatry," which he formulates: "All psychic diseases are the result of somatic abnormalities; only the body can become sick, and not the psyche as such." In other words, Friedreich is the first prominent representative of "psychology without a psyche" along medical lines, and started the neurophysiological psychiatry which led the field for the following 75 years. Friedreich had learned and accepted from Heinroth the view for differential and systematic consideration. He was indeed fortunate in standing at the start of neurophysiological psychiatry, for if those theories which he elaborated later in his own *Textbook of Pathology* had been presented some decades later, neurophysiology as it

developed during the second half of the century would have considered him more "mystical" than anything Heinroth had represented. Friedreich was an excellent abstracter and summarizer who, if he so desired, was able to present most objectively any other writer's work. When it came, however, to presenting theories which he rejected, he deviated considerably from the path of objectivity.

It is hard to say whether it was a result of the popularity of the Friedreich book or of the antihistorical tendencies of the new physiological psychiatry which developed in the mid-nineteenth century that no new extensive textbook on the history of psychiatry appeared for almost 50 years. If we examine leading works on the general history of medicine, like those of Emile Isensee (1845), Heinrich Haeser (1875), or August Hirsch (1893) or actual textbooks of psychiatry like those of Feuchtersleben (1845), Flemming (1859) or Schuele (1878), we find each depending on Friedreich as their major source.

The first notable history of psychiatry deviating from this pattern comes from a Belgian with a German name, F. Lentz: *Histoire des Progress de la Medicine Mentale depuis le Commencement du 19ieme siecle jusqu'a nos Jours"* (History of the Progress of Mental Medicine since the Start of the Nineteenth Century until Our Own Days), published in Paris in 1876. This book sums up the two tendencies which had in previous decades developed along historical lines. Although any interest in earlier centuries' psychopathological views was killed by the new neurophysiological tendencies, alienists still had to treat their patients (especially, too, since institutions were springing up by the dozen). These workers had a certain interest in knowing about earlier attempts at institutional and personal treatment, and quite a number of books appeared which reported earlier treatments and institutional care. The most intensive of these studies came in 1851 from Heinrich Neuman: *Ueber die oeffentliche Irrenpflege im 18 & 19 Jahrhundert* (On the Public Care of the Insane during the Eighteenth and Nineteenth Centuries). This book was widely used, even though its author belonged to the disregarded psychologic school. The earliest of these studies came from a Frenchman, Ch. Laseque: *Études Historiques sur L'Alination Mentale* (1845). The crowning work was Theod. Kirchhoff's *Grundriss einer Geschichte der deutschen Irrenpflege* (Outline of a History of the Care of the Insane in Germany). It must be pointed out that the English-speaking world also appeared to take considerable interest in this same aspect. Much material on alienation was contained in the famous memoirs of John Conolly which appeared in London in 1869. Some historical studies on mental illness also came to the fore during the last century in the framework of growing historical interest in the antique world, which was especially strong in France. Here we may note one of the more prominent: Semelaigne's *Études Historiques sur L'Alienation Mental dans L'Antiquite* (Historical Studies on the Institutional Care of the Insane in Ancient Times), published in 1870. Both these new interests had given Lentz enough material for an entirely new perspective on the history of psychiatry. He attempted to see these radical changes in a light considerably more objective than Friedreich's.

By 1885 B. Heinrich Laehr had already advanced a completely different historical aspect of his field of psychiatry. In that year he published a rather strange book entitled, *Gedenktage der Psychiatrie* (Memorable Dates in the History of Psychiatry), which covered the time from 1655-1883. Here he reported, year by year, dates from the lives and work of professionals, as well as special cases and institutional and legal events. For the first time a pragmatic chronology was advanced. Laehr must have been already considerably far into his bibliography of psychiatry when he published his *Gedenktage*, for both are undertaken in the same spirit. The bibliography is also as uneven and in many ways as uncritical a work as the *Gedenktage*. This is especially true for works listed for the first 150 years. Writings on witchcraft, theology and herbatology are mixed in with subject matter which later became important. In the coverage of the later period we find that material which originated in the above-mentioned psychological school is left out, because these concepts were not acceptable to Laehr's own theoretical point

of view. The added abstracts were made, it seems, without any specific methodological principle; they are partly tables of contents, or emphasize some part of the contents which interested Laehr. They have, therefore, sometimes only a secondary value. In spite of all we may wish to say against Laehr's bibliography, however, it remains the most important source book for the period in the history of psychiatry which it covers. None of those who, after the start of the twentieth century, increasingly interested themselves in the genetic growth of psychiatric work have, so far as we can see, taken much advantage of the Laehr bibliography. The clearest evidence of this was its being forgotten in the memorial which the leading German periodical *Der Nervenarzt* devoted to B. H. Laehr

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ON THE HURRY OF THIS TIME

With slower pen men used to write,
Of old, when "letters" were "polite";
In Anna's, or in George's days,
They could afford to turn a phrase

Or trim a straggling theme aright.
They knew not steam; electric light
Not yet had dazed their calmer sight;
They meted out both blame and praise
With slower pen.

Too swiftly now the Hours take flight!
What's read at noon is dead at night;
Scant space have we for Art's delays,
Whose breathless thought so briefly stays,
We may not work—ah! would we might!—
With slower pen.

—Austin Dobson,
19th Century

CORRESPONDENCE

ADMINISTRATION OF SUCCINYLCHOLINE

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I read with great interest the article by David J. Impastato entitled "The Safer Administration of Succinylcholine Without Barbiturates—A New Technique" in the November 1956 issue of the Journal.

Dr. Angelo J. Emma and I have been using a modification of the above technique in over 2,000 treatments. I would like to mention the modification because I believe it makes the EST procedure much safer.

Atropine 1/75 mg. is given intravenously. A 22-gauge needle is used to facilitate the rapid injection of anectine which follows later. The syringe which contained the atropine is removed from the needle and another syringe containing 5 mg. to 20 mg. succinylcholine is connected to this needle and injected as rapidly as possible. Ten to 13 seconds after completion of the injection of anectine, a subthreshold electric stimulus to produce a petit mal reaction is administered.

For this stimulation it is important that an electroshock machine (AC current) with built-in adjustable voltage and automatic timing be used. We recommend that the subthreshold stimulus be 100 volts and .1 seconds. Some electroshock machines (AC current) are adjustable for only low, medium, and high; the "low" being equal approximately to 125 volts. When such a machine is used for subthreshold stimulation, a grand mal response may be achieved often before anectine has reached its maximum effect of muscular relation, thus increasing the possibility of skeletal complications.

Twenty to 25 seconds after the first stimulation, a second electric stimulus is administered. A grand mal seizure is obtained with 120 volts and .4 seconds. With this method we obtained a very soft grand mal reaction which is hardly noticeable, and can be detected often only by observing the face for the rhythmic contractions of the eyelids.

WILLIAM KARLINER, M. D.,
Scarsdale, N. Y.

AS TO WAR—

When Adler was on special war duty in Cracow, a Polish Jew deserted to the Austrian side, and became one of his patients. "How long were you in the Polish Army?" Adler asked him. "I joined up three days before I gave myself up to the Austrians," the Jew replied. Adler looked surprised. "I was also in the Russian-Japanese war," the Jew continued, "that time I was made prisoner after two days!" "But how did you manage that?" Adler demanded. "I should like to see the war I would take part in for more than two days," replied his patient. In repeating this story, Adler said with a smile and a sigh, "If only all soldiers had the same good sense!"

—PHYLLIS BOTTOME,
Life of Alfred Adler

PRESIDENT'S PAGE

The Council of The American Psychiatric Association took an important step forward when it authorized the formation of an *ad hoc* committee in liaison with the American Academy of General Practice. It was a step which is bound to have far-reaching consequences. The first meeting of this committee, under the direction of Dr. Robert A. Matthews for the A.P.A. and Dr. Andrew S. Tomb for the Academy, took place during the time of our fall meetings and at once there came into sharp focus the urgent need for closer cooperation between these two parent organizations.

The fact that the family doctor plays an exceedingly important role in the emotional problems of the family and the community has long been known. Actually, at times he has been characterized as the first line of defense against mental illness. Sporadic efforts of an educational nature have been made to bring psychiatrists and practitioners together at various times with some noticeable success, but the time heretofore has not been ripe for the development of a sustained program. This time, and under the aegis of this present group, one gets the impression that the omens and portents are right and a workable relationship will be evolved. Our representatives are now working with a closely knit group which represents the grass roots of the practice of medicine.

The committee considered at length all the various problems that one would expect to come before them. They discussed the need for a team relationship between generalist and psychiatrist and generalist and private and state institutions. They saw also that as a by-product of this working relationship the psychiatrist would necessarily come into proper focus in the eyes of family doctor and public alike. Hope was also expressed in the discussion that a closer working relationship between these two medical disciplines would aid in the development of effective mental health programs in their broadest aspects.

As might be expected, many of the problems which the committee discussed have been examined before, but there was an air of enthusiasm, cooperation and timeliness about these deliberations which augurs well for the future. They were particularly impressed with the need for taking steps to instruct medical students and interns in the type of psychiatry they will need in general practice. They spoke of preceptorships and mental health fellowships for generalists and noted that the military services had done well in the war with their 3-month preparatory courses. They rightly noted that these have not led to the spawning of a group of quasi-psychiatrists, but rather they attracted some men into the field.

The thought of generalists working part time in mental health clinics and even in state hospitals, under proper direction, intrigued the group and they emphasized again the need for an exchange of ideas about drugs and other agents in the light of the plethora of ataraxics which appear regularly.

There were various other discussions and recommendations, but these give an idea of the directions in which the committee is moving. They have cast about to secure funds for future meetings, allotted tasks among themselves, suggested they be made a permanent group, and in general reacted in keeping with the importance of the project they have undertaken.

Among the things which have kept us apart from the practitioners, I feel, has been the attitude of some of our emissaries of carrying the light into dark places. Family doctors have resented that attitude and so would we. All such condescension, apparent or real, will disappear once these two groups move further along. It may be that the appointment of this group was the beginning of one of our most important contributions to psychiatry.

FRANCIS J. BRACELAND, M. D.

COMMENT

THE KINSEY RESEARCHES

The death of Alfred C. Kinsey has cut short the career and work of an eminent investigator in the field of sex behavior. His death is a great loss to scientific accomplishment, and a great personal loss to his many friends and admirers. At the same time it is heartening to know that, with Paul Gebhard as executive director, Wardell Pomeroy as director of field research, and with the other associates, drawn from the field of the social sciences, the research will continue along lines already laid out.

It is especially disappointing that Kinsey could not help to complete the three studies that are being prepared for publication in the next few years. Foremost among these are two books on sex and the law. One book will review state laws regarding sex behavior and sex offenses and problems of their enforcement. The Kinsey group recently suffered a loss in the death of Douglas Short, a San Francisco, California, lawyer, who had worked extensively on this report. The other study will describe police, court, and prison handling of sex offenders, and is based on several thousand case histories of convicted sex offenders. Kinsey himself interviewed a great many of these offenders in California prisons.

One other study intended for early publication is of especial interest to physicians. This study shows that the large proportion of illegal abortions are performed on married women as a method of limiting the number of children.

These are but three of some 20 topics of sex problems on which material is being collected.

To many psychiatrists Kinsey was a controversial figure. Some of those who were most enthusiastic about his first volume turned against him and strongly criticized his later work. Regardless of one's estimation of his work, I think that there is general agreement that Kinsey was a dedicated man who believed that the forbidden subject of sex must be brought out into the open where it can be freely discussed. So strongly did Kinsey believe in his work that at times he supplemented the finances of his group from his own pocket. All money received from royalties went into the research funds, and neither he nor any member of his group personally made a cent of profit from writings, lectures, or other activities. Kinsey and his group never let popular interest or acclaim interfere with the grinding work of scientific investigation.

In the beginning, the Rockefeller Foundation largely supported Kinsey. A congressional investigation, carried out in a farcical way, issued a one-sided report of the great foundations of this country, without giving them a chance for reply. Kinsey and his work were bitterly criticized. The foundations must have realized the threat held over them by Congress if they gave funds to such controversial subjects as Kinsey's study of sex. For the past few years, The National Research Council reduced its grant but still gave a small one, to assert its general approval of the Kinsey work, without necessarily commending all the methods or findings.

The 4 main criticisms of Kinsey's work and the answers I would make are as follows: (1) His material represents not a random sample of the population but a highly selected group; therefore, his results do not apply to mankind generally. (2) His technique of collecting information prevents getting the right answers; particularly among the psychoanalytic group do we find these criticisms coming forth. (3) Kinsey did not even try to get some material about sex information that in the minds of some of his critics is most important to a real understanding of sex. (4) His statistical material was not done properly.

One may answer these adverse criticisms in part by pointing out that:

Kinsey himself always frankly admitted the lack of a random sample of the population. It must be obvious to even the most

inexperienced that a random sample from the population is impossible to obtain. A number of persons will refuse to submit to questioning, and immediately a special process of selection begins.

It is often claimed that all those who gave their history to Kinsey were volunteers; by inference, that these were abnormal persons and were thoroughly unreliable. Actually, many informants were not volunteers in the ordinary sense of the word. Kinsey often arranged to talk to groups in return for an agreement that the entire group would submit to the questionnaire. Undoubtedly, many persons who would not have volunteered were included in such a series. Numerous workers went to Bloomington, Indiana, to observe and study Kinsey's methods and were told that the best way to understand the technique was to submit themselves to the interview.

It is easy to attack the accuracy of answers to questions. There is no way to be absolutely certain that any material a subject gives you is true. The field of psychoanalysis has given us a most interesting example of this sort. For many years Freud insisted on the importance of infantile sexual traumas and believed his patients' stories about seductions in early childhood. Finally he came to realize that many or most of them were nothing but fantasies on the part of the patients.

Kinsey used a technique somewhat similar to the Minnesota Multiphasic Personality Inventory as some check on the reliability of his informant. He also, when possible, interviewed the informant's spouse as an additional check; and interviewed some informants a second time after a considerable interval, to check one report against the other.

Kinsey selected certain material which he thought could be quantified by statistical analysis. He was recording sex at primarily a behavioristic level. He deliberately left out much relevant material about sex behavior and sex feelings because he felt it could not be measured statistically. Any one, of course, has the right to say what he thinks is important in studying sex, but likewise an investigator has the right, in making a study, to limit himself to certain factors provided they are openly and clearly stated.

Any detailed discussion of statistics would have to be highly technical and beyond the scope of the average psychiatrist. Kinsey told me, however, that in the new book on abortions, a special chapter on the statistical handling of the material was written by a man acknowledged as a very competent statistician; and that Kinsey himself was leaving the preparation and interpretation of these statistics to the statisticians.

It seems probable that the two greatest results of Kinsey's research will be—first, that sex can be studied in the open and talked about as it could not be when he started his researches. Sex was then a tabooed subject, and researches about sex were frowned upon. In 1936 there was only one institute for the study of sex in the whole world. Much of the popular criticism of Kinsey and even a considerable amount of that from scientists, including psychiatrists, seem definitely to spring from this old taboo against a free, frank discussion of sex. It is the one problem and the only subject that cannot be discussed freely and openly. Critics often rationalize their objections and do not realize themselves what unconscious factors cause them to be so highly emotional and critical of Kinsey.

Kinsey's second contribution lies in the field of medical jurisprudence. His findings show what people actually do in their sex life and to what extent their practices may include the so-called perversions and other illegal acts. The Kinsey legal reviews also point up the extreme confusion and contradiction in laws about sex, and the great injustices that can and do result when certain sex offenses are made felonies in some states and misdemeanors in others, with penalties varying from a life sentence to a small fine or a short jail sentence.

These comprehensive findings and their implications have already affected the handling of charges against persons accused of sex offenses; the use of medical consultants; the content of court decisions; the use of probation; the interpretation of existing sex laws; and the making of new ones. Recently the American Law Institute adopted in its draft of the Model Penal Code certain re-

ductions in the penalties imposed upon deviate sexual offenses, grading them, for example, according to the degree of compulsion or the age disparity between partners. Official bodies in Great Britain have recently recommended similar liberalizing changes to make sex laws and enforcement conform more nearly to the actual practices of the average citizen.

K. M. B.

Tribute to Dr. Dunton

On the invitation of President Braceland, Dr. William Rush Dunton, Jr., senior member of the Editorial Board of the American Journal of Psychiatry, was present at the luncheon meeting of Council at the Woodner Hotel in Washington, October 27, 1956.

Dr. Dunton was appointed to the Editorial Board in 1927, but his contributions to the editorial activities reach back at least two decades before that date. Dr. Edward N. Brush was at that time editor of the JOURNAL and Superintendent of the Sheppard-Pratt Hospital, and Dr. Dunton as assistant physician on Dr. Brush's staff also relieved him of some of his editorial duties. From time to time in the absence of the Chief he would also attend to the final chores in seeing an issue through the press.

The Association was smaller in those days and its members were, for the most part, attached to the staffs of mental institutions. Therefore it was possible to publish a feature called the Half-Yearly Summary which recorded comprehensively staff appointments and changes among workers in the psychiatric field. The compiling of this Summary twice a year was another of Dr. Dunton's responsibilities.

It is probably not generally appreciated that the senior member of our Editorial Board has been giving service to the JOURNAL for a full half-century. It was in recognition of this circumstance that Dr. Dunton was asked to attend the luncheon meeting of Council and that the facts in the case might become a matter of record. As a part of this record a scroll was presented to Dr. Dunton expressing the grateful appreciation of the Council, and through Council of The American Psychiatric Association, as well as of the other members of the Editorial Board, of the fifty years of devoted service of the senior member.

NEWS AND NOTES

International Symposium on the Reticular Formation of the Brain.—This International Symposium, under the auspices of the Henry Ford Hospital, Detroit, Michigan, is to be held during March 14, 15, and 16, 1957, at that institution. The program committee responsible for organizing the Symposium consists of advisory members: Horace W. Magoun, Dept. of Anatomy, University of California Medical School, Los Angeles; J. Douglas French, Veterans Administration, Long Beach, California; Herbert H. Jasper, McGill University, Montreal Neurological Institute; Russell N. De Jong, Dept. of Neurology, University of Michigan, Ann Arbor; Ralph W. Gerard, Mental Health Institute, University of Michigan, Ann Arbor; Arthur A. Ward, Jr., University of Washington School of Medicine, Seattle; and co-chairmen Robert S. Knighton, Division of Neurosurgery, Henry Ford Hospital; Lorne D. Proctor, Division of Neurology and Psychiatry, Henry Ford Hospital; Russell T. Costello, Dept of Medicine (Neurology), Wayne University, Detroit; secretary William C. Noshay, Section of Neurology, Henry Ford Hospital.

The contributors include members from the various neuroanatomical and neurophysiological groups that are investigating this area of the brain, and geographically represent England, France, Italy, Sweden, and Australia, as well as the United States and Canada.

Attendance is by invitation. Dr. William C. Noshay, Henry Ford Hospital, Detroit 2, Michigan, would be pleased to hear from anyone interested who has not received an invitation, as there is a possibility that further accommodations will be available.

University of Kansas Graduate Course.—A wide range of problems related to diseases of the nervous system will be discussed in a two-day postgraduate course in neurology to be presented February 27 and 28, 1957 at the University of Kansas Medical Center, Kansas City, Kansas. Four eminent guest instructors will contribute to the informal symposium-type program. They are: Dr. Joe R. Brown, University of Minnesota Graduate School; Dr. Joseph M. Foley, Harvard University; Dr. Franklin R. Miller, The Snyder Clinic, Winfield, Kansas; Dr. John A. Segerson, The Menninger Foundation.

Registration fee for the course is $30.00. Address all inquiries to the Department of Postgraduate Medical Education, University of Kansas School of Medicine, Kansas City 12, Kansas.

American Orthopsychiatric Association.—The Association will hold its 34th annual meeting at the Hotel Sherman, in Chicago, on March 7, 8, 9, 1957.

The Association for the first time organized a Combined Book Exhibit at the meeting in Chicago in 1955. The Combined Book Exhibit in 1957 will be located in the exhibit area on the mezzanine of the Hotel Sherman. It will be well staffed throughout the meeting.

It is suggested that in preparing lists of publications for the Exhibit the fields of professional interest of those attending be kept in mind. The major fields are: psychiatry, psychology, social work, sociology, anthropology, education, nursing, pediatrics and public health.

The Association will be meeting jointly with the World Federation of Mental Health, the American Academy of Child Psychiatry and the American Association of Psychiatric Clinics for Children.

American Fund for Psychiatry.—Dr. Vernon J. Lippard, Dean, Yale University School of Medicine, has been elected chairman of the Board of Directors, American Fund for Psychiatry. Dr. Lippard replaces Dr. George P. Berry, Dean, Harvard Medical School, who has accepted a position of the executive board.

The American Fund for Psychiatry, a not-for-profit organization that supports young psychiatrists in academic careers and makes it possible for them to devote full time to re-

search and training, has, according to Mr. Irving B. Harris, president, allocated during the first 2 years of its operation, $60,000 to support research and training in psychiatry. Goal of the 1956-57 campaign for funds is $150,000.

Tuition Fellowships for Hungarian Refugee Students.—Dean Kenneth D. Johnson, of the New York School of Social Work, Columbia University, has announced that two such fellowships have been made available at the New York School, which is the first graduate school of social work to provide funds for Hungarian refugees. Currently there are 43 students from 23 countries engaged in full-time study at the School.

The tuition awards for the academic year 1957-58 will be made to applicants who have, or acquire after their arrival in this country, the necessary academic preparation. Application for these fellowships should be made directly to the school, at 2 East 91st Street, New York 28, N. Y.

Death of Dr. Goodhart.—On December 6, 1956, Dr. S. Philip Goodhart died at the age of 84, in the Harkness Pavilion, Columbia-Presbyterian Medical Center.

In practice since the turn of the century in New York, Dr. Goodhart received his medical degree from Yale in 1894, and did two years postgraduate work in Germany. During his subsequent career he served as chief neuropsychiatrist at Montefiore Hospital in the Bronx and as professor of neuropsychiatry at the New York Polyclinic Medical School. He also later held an appointment on the staff of Columbia University and was appointed chief neuropsychiatrist at Morisania Hospital, the Bronx.

Dr. Goodhart was frequently called upon to examine prisoners accused of major crimes and to give expert testimony on their mental status. He was also instrumental in making and distributing medical films in the U.S. and abroad. He was the author of numerous medical articles and co-author of the book *Multiple Personality*.

Dr. Goodhart was a Fellow of the New York Academy of Medicine and of The American Psychiatric Association, and a diplomate of the American Board of Psychiatry and Neurology.

American Orthopsychiatric Association.—The thirty-fourth annual meeting of this Association will be held at the Hotel Sherman, Chicago, March 7-9, 1957.

The Association is a membership organization of the 3 major disciplines concerned with treatment of human behavior: psychiatry, psychology, and social work. Its members also include educators, anthropologists, sociologists, and pediatricians. The American Academy of Child Psychiatry and the American Association of Psychiatric Clinics for Children will hold their annual meetings simultaneously.

A roundtable on world mental health problems, sponsored by the Association and the World Federation for Mental Health, is scheduled for the evening of March 6, preliminary to the 3-day meeting. Participants will include Dr. Margaret Mead, anthropologist and president of the federation, and its director, Dr. John R. Rees.

The Association's president, Dr. Luther E. Woodward, of Brooklyn, will give the presidential address at the opening session on March 7. Other officers are Dr. Theodora M. Abel, New York, vice-president; Jessie Edna Crampton, Brooklyn, secretary; and Dr. Reginald S. Lourie, Washington, D. C., president-elect.

Asociacion Psiquitrica Peruana.—The newly elected members of the executive committee for this Association are: president, Carlos Alberto Segúin, M. D.; past-president, Federico Sal y Rosas, M. D.; vice-president, Francisco Alarco, M. D.; general secretary, Raúl Jerí, M. D.; treasurer, Niza Chiock de Majluf, M. D.; and proceedings' secretary, Oscar Valdivia, M. D.

All correspondence should be directed to the president, Carlos Alberto Segúin, M. D., J. Huancavelica 470, Lima, Perú.

Israel Strauss Commemorative Volume.—The Journal of the Hillside Hospital has issued a special Israel Strauss Commemorative volume as their July-October 1956 number. The late Dr. Israel Strauss was an original member of the Committee for Men-

tal Health among Jews organized in 1917, and founded Hastings Hillside Hospital for the treatment and prevention of mental disease in 1927. The 375-page commemorative issue was prepared by an editorial subcommittee of the Hillside Hospital *Journal* and contains over 40 articles on psychiatry and several tributes to Dr. Strauss, who died in 1955.

Spanish Edition of the A.P.A. Newsletter.—The first edition of the Spanish A.P.A. Newsletter (*Noticiero de la A.P.A.*) was issued December 15, 1956, and is being mailed monthly to 600 psychiatrists in Spanish-speaking countries as well as to 600 key public health officers throughout the Spanish-speaking world. The English version is prepared by Robert L. Robinson of the Washington office and translated by the W.H.O. editorial staff. Written in Castillian Spanish, the first edition contains a greeting from President Braceland and a historical note on the founding and development of the A.P.A. It will be devoted primarily to carrying notes on psychiatric developments in Central and South America.

Cincinnati Academy of Medicine Centennial.—The Academy of Medicine of Cincinnati (Hamilton County Medical Society) will celebrate its Centennial, February 27 through March 5, 1957. The occasion is to be highlighted by a Health Museum and Exposition at the Music Hall, where 175 health and scientific exhibits, representing medicine, hospitals, research centers, public health, nursing, pharmacy, and industry will be displayed.

Notable among these exhibits and occupying some 4,000 square feet of space, will be an atomic energy exhibit from the American Museum of Atomic energy entitled "Atoms for Peace." On display also will be "Juno," a full-sized, activated manikin, graciously loaned for the occasion by the Dominican Republic. Juno is operated electrically, and with concurrent recorded narration, will demonstrate blood vessels, bones, and organ structures of the body.

Dr. Paul D. White and Dr. Walter Alvarez, eminent medical scientists and authors, have accepted invitations to be among the guest speakers. On the last night of the Exposition, March 5, 1957, the Centennial Convocation will be held. The Convocation address will be given by Sir Edward Appleton, Nobel Laureate, Edinburgh, Scotland; and civic leaders, officials of both the American and State Medical Associations, and government dignitaries will take part in the elaborate ceremonies.

The New York School of Social Work.—A recent census of the New York School of Social Work shows that graduates live in 47 states, the District of Columbia, 3 territories, and 34 foreign countries. Wyoming is the only state not represented. A total of 3,409 (80% of the living graduates) replied to a questionnaire on which the results are based.

One of 4 of the graduates in the survey is a man. Seventy-two percent are employed —97% in social work. There are 13 deans of social work schools—6 of them in foreign countries. One-half of those with social work jobs are employed in the combined areas of medical and mental health, family and public assistance. Seven percent are teaching faculty or on the administrative staff in schools of social work. Less than 1% of all the graduates in the survey are unemployed and seeking work, according to the survey.

The National Foundation for Infantile Paralysis Fellowships.—March 1, 1957, is the deadline for submitting applications to the National Foundation for postdoctoral fellowships. These applications will be considered in May.

Postdoctoral fellowships are available in (1) rehabilitation, (2) psychiatry, (3) orthopedics, (4) the management of poliomyelitis, (5) preventive medicine, and (6) research and/or academic medicine.

In addition to a monthly stipend which varies from $3,600 to $6,000 annually, the National Foundation arranges for compensation to the institution according to the program undertaken. The next deadline for applications will be September 1, 1957, for consideration in May. For further information write: Division of Professional Education, National Foundation for Infantile Paralysis, 120 Broadway, New York 5, N. Y.

After March 1, 1957, address the Foundation at its new street and number, 301 East 42nd Street.

KAREN HORNEY LECTURE.—The Association for the Advancement of Psychoanalysis announces the fifth Karen Horney Lecture to be given by Dr. Frieda Fromm-Reichmann on "Psychotherapy of Schizophrenics." The meeting will be held on Wednesday, March 27, 1957, at 8:30 p.m., in Hosack Hall at the New York Academy of Medicine, 2 East 103rd Street. A dinner honoring the guest speaker will precede the lecture.

ASSOCIATION FOR RESEARCH IN NERVOUS AND MENTAL DISEASE.—At the Thirty-Sixth Annual Meeting of this association, held in New York City, December 7 and 8, 1956, the following officers were elected for the year 1957: president, Dr. Francis J. Braceland; first vice-president, Dr. Paul Hoch; second vice-president, Dr. Carl Pfeiffer; secretary-treasurer, Dr. Rollo J. Masselink; assistant secretary, Dr. Lawrence C. Kolb.

The Thirty-Seventh Annual Meeting will be held at the Hotel Roosevelt in New York City on December 13 and 14, 1957. The topic will be "The Effect of Pharmacologic Agents on the Nervous System."

HIGH POINT HOSPITAL.—The Board of Directors of this hospital announces the creation of The Gralnick Foundation as a public charitable trust under the laws of New York State. The funds of the Foundation are to be used for the following purposes: (1) to advance medical research which is devoted to forwarding our knowledge of mental illness and its treatment; (2) to aid organizations engaged in the mental hygiene movement, including public clinics devoted to the psychiatric care of the community; (3) to assist schools devoted to the advanced training of psychiatrists, particularly in psychoanalysis; (4) to stimulate medical school and hospital programs devoted to the advancement of psychiatric research, training, and treatment. Contributors will be informed periodically about the Foundation's specific programs of assistance and research projects.

The Board of Directors is composed of the following members: Bernard D. Fischman, Esq., Alexander Gralnick, M. D., Stephen P. Jewett, M. D., and William V. Silverberg, M. D.

METROPOLITAN STATE HOSPITAL (NORWALK, CALIFORNIA).—Dedication ceremonies for the new 504-bed Receiving and Treatment Center at this hospital took place December 1, 1956, with Governer Goodwin J. Knight as the principal speaker. Dr. Robert E. Wyers, superintendent and medical director of the Metropolitan, presided at the ceremonies.

"WHILE HUMAN NATURE REMAINS THE SAME"

> Many and grievous were the things which befell cities in those revolutionary struggles [between Greek city-states leading to the Peloponnesian War]—things which occur now and will always recurr while human nature remains the same, albeit with more or less violence and in different forms according to the particular turn of events. For in peace and prosperity both cities and private men are better disposed, since they are not under the constraint of necessity. But war is a violent schoolmaster: it robs men of their day-to-day margin of sufficiency and debases the character of most to the level of circumstances.
>
> —THUCYDIDES

BOOK REVIEWS

EVERY OTHER BED. By *Mike Gorman.* (Cleveland and New York: The World Publishing Company, 1956. $4.00.)

This book is designed by its author to assist in speeding up progress in the development of effective programs for the treatment and prevention of mental illness. Facts are presented to indicate the magnitude and importance of the problem. Reference is made to existing inadequacies of mental hospital provisions for treatment. Attention is directed to the lack of sufficient financial support for research. A plea is made for more organic research. There is discussed the opening up of "a new frontier" in chemotherapy. Shortages of psychiatric personnel are cited as impediments to progress. The active interest of state governors and its significance are dealt with at some length. Research progress against the major mental illnesses is discussed, and this is followed with a chapter entitled "Where Do We go from Here?"

The following impressions are produced by this book: that "Snake Pits" still exist in certain parts of the country; that treatment programs are not taking advantage, as they should, of existing scientific knowledge; that psychoanalysis is not making a great contribution in the treatment of the major psychoses; and that the great hope for the future probably lies in coordinated multidisciplinary research, in the recruitment and training of adequate staffs, and in the appropriation of vastly increased budgets for research, training and treatment programs.

While the author reiterates our deficiencies in dealing with the problem of mental illness, he furnishes many grounds of hope for future progress. In regard to mental hospital treatment, he refers to one state hospital that reduced its patient population in 6 years from 1,800 to 1,400, with a discharge rate of approximately 80%. This result came about through "adequate psychiatric personnel intensively applying new research knowledge to the treatment of patients." Some other state hospitals are following suit with encouraging results.

Other grounds of hope for future progress lie in an awakened interest on the part of state governors in appropriating necessary funds for treatment facilities, research and training; together with fascinating leads in the realm of research.

In 1951, forty-five state governors voted unanimously for a 2-year study of "ways in which their states might work toward prevention and cure of mental illness"—resulting in a report in 1953 entitled "Training and Research in State Mental Health Programs." This report included the conclusion that "research and training are the essential bases for reducing admissions to mental hospitals and, ultimately, for reducing hospital populations." Following the publication of this report and the conduct of state-wide surveys, funds were being set aside by the states for training in 1955 that "may be as much as five or six times the amount of any previous year." Ohio, for example, appropriated ten million dollars for the first two years for a new training plan; and large amounts were appropriated for research and training in the south, in the east, in the mid-west and in the west.

In regard to fascinating leads for research, the author cites many current research projects including work being done on lysergic acid that may pave the way for the discovery of a chemical which originates in the human body and which plays an important part in the causation of schizophrenia. Another intriguing lead is the securing of some confirmatory evidence to support the theory that there are certain pathways to the brain that facilitate mental and bodily processes, while other pathways suppress activity. Working on this theory and by implanting electrodes in deep areas of the brain, it has been possible to effect the improvement of a number of schizophrenics who had been stuporous and mute.

This is a book wherein the author does not pull his punches. He refers to the typical state hospital as "incredibly isolated from the main stream of American medicine." He quotes one leader of American psychiatry as stating that "not one of the modern methods being used in psychiatry has been discovered in this country." He says that psychiatric research has been starved with only $10,786,253 appropriated in 1955 by the country, as a whole, while a number of individual industrial companies spent much more for industrial research.

Indeed, this book is a call for action on the part of citizens generally, and on the part of governments and of scientists. It is to be hoped that the book will succeed in its purpose.

CLARENCE M. HINCKS, M. D.,
Toronto, Canada.

THE PSYCHIATRIST AND THE DYING PATIENT. By *K. R. Eissler, M. D.* (New York: International Universities Press, 1955. Price: $5.00.)

Although most psychoanalysts today have rejected Freud's theory of a death instinct, Dr. K. R. Eissler in his *The Psychiatrist and the Dying Patient,* not only affirms the death instinct but makes it an integral part of an approach to the dying, an approach which he terms *orthothanasia.* In his own words, this is "the right, true, or proper manner of dying." This right, true and proper manner takes some 338 pages to expound.

For Freud, the author of the death instinct, death was the central and unalterable fact. For him, life seemed to be a fitful flare lighting up a grim, fixed, inorganic landscape. At the same time, "Freud saw in death one of the basic goals of the organism, one which was present with the beginning of life" (p. 32).

This writer has no doubt that Dr. Eissler has helped his dying patients. But this has been for reasons which have nothing whatsoever to do with a death instinct. For the truth of the matter is that there is no such a thing as a death instinct or "death instincts." G. Schorr (quoted by Eissler) was of the opinion that the dying person's basic sickness did not exhaust the causes of death. On p. 39 we read: "Much that passes at autopsies as a cause of death has been present previously. . . . It is useless and inappropriate to look for any causes of death" (Schorr 1931). By implication, we may, if we wish, view the pathologist's gross specimens and slides, but we must also look for something more potent and sinister. The truth of the matter is that this monstrous concept is tinged with supernaturalism. For this potent and unseen force is conceived as distinct from nature, yet standing in a definite relationship to nature, participating in and influencing human economy. This is supernaturalism and belongs to the same family of concepts as mana and animal magnetism. More specifically this concept is a good example of the ancient and ever recurring error of hylozoism—but with a perverse twist. If we ask where the "death instincts" come from, Freud's answer would be that they had no origin since along with the "life-instincts" they are an inherent property of all living cells. Freud dwelt approvingly on the theory that the "death instincts" had their origin in the catabolic, disintegrative processes in living matter (*Beyond the Pleasure Principle*, p. 63). This kind of thinking is curiously suggestive of E. Haeckel's aesthesis, tropesis, and other ingenious but unreal mental fabrications which were supposed to be a substrate of all matter. On this basis the "death instinct" must be rejected as the crudest sort of hylozoism. It leads for example, to the absurd idea that the function of disease is to give the death instinct a temporary discharge: "Possibly man would die far earlier than he does if no place were provided for disease," (p. 103). We are also told that the high infant mortality rate is because in infants the death instinct has not yet fused with and been pacified by the libidinal instincts.

As we shall see, Freud had an emotional need of a death instinct. But in order to introduce such a concept he had first to do some tampering in the area of casuality. Specifically he had to confuse the distinction which Aristotle made between "efficient" and "final" causality. It is like saying that the detailed changes observed in a growing tulip bulb are caused by "tuliphood." Similarly, since man is mortal and ultimately scheduled for the corruption of the grave, Freud made of death not only a final cause but also an efficient cause continually operating, consciously or unconsciously, in the human organism. "Death is an unavoidable, logical process which is the last and ultimate consummation of life."

One may ask for whom this book is intended. Certainly not for the denizens of those two main psychoanalytic thoroughfares, Park Avenue and Hollywood Boulevard. For the dexedrine-sleeping pill circuit will have no part of death in any shape or form. And the United States proper, contrary to Dr. Eissler's belief, is still overwhelmingly theistic, and would be highly suspicious of a new priesthood. Dr. Eissler, who is bullish on atheism, speaks of the "increasing reduction of true religious sentiments in Occidental man," and predicts that the "frequency of demand for the psychiatrist during the terminal pathway will grow," (p. 119). Possibly Dr. Eissler will prove to be right. One may very well picture one more (psychological) capsule—"terminal pathway capsules," to be added to the stimulants and ataraxic agents of a frenzied future generation which no longer has the time nor inclination to read and has completely lost those consolations of philosophy and religion which sustained Western culture, both pagan and Christian, until quite recent times.

Having announced, "the religious principle cannot be accepted as objectively valid by secular psychiatry" (p. 55), the author immediately, and one fears, quite dogmatically proclaims a new ultimate good. This new good is "maximum individualization." "The full awareness of each step that leads closer to death, the unconscious experience of one's own death up to the last second which permits awareness and consciousness, would be the crowning triumph of an individually lived life. It . . . [is] the only way man ought to die if individuality were really accepted . . . and if life in all its manifestations were integrated which would of course include death and the sorrows of the terminal pathway" (p. 57). And here are quoted the famous last words of an heroic individualist who refused the proffered anodynes exclaiming; "Nobody shall deprive me of my death!" (p. 57).

It is Dr. Eissler's contention that at the moment of death there is a sort of recoil or retrograde effect upon the dying man's entire past. "One can say it is self-evident that with the moment of death a person's life record becomes petrified and that by recoil this moment (death) sheds an unalterable cast upon all previous life moments" (p. 51). To the reviewer this is a very creepy sort of whimsy, a metaphysical jumblyland which cannot be penetrated. It would seem that at the moment of exodus, the dying man becomes a sort of Janus-faced monster, with the face which had always faced the future, shrouded forever, the opposing face beholding the entire past now preternaturally illuminated with integrated meaningfulness and individuation. This is dying "according to the reality principle."

But there are other ingredients in this most odd confection of orthothanasia. On p. 141 we read, "The dying person is exposed—so one must deduce from his [Freud's] theory—to an impending release of intensive, self-destructive energies, and to bind them by his own libidinal resources being impossible, he may need the accretion or influx of libidinal quantities in order to compensate for his own deficit . . . the accretion of sublimated libido from without apparently eases the patient's struggle." Dr. Eissler's recipe for meeting this energic deficit is for the psychiatrist to develop and communicate sorrow and pity. This must be intense

and sincere. At the same time the psychiatrist must develop and convey a conviction of the indestructibility of the patients body and soul. "The psychiatrist must not waiver in his conviction that the patient is ultimately immortal" (p. 143). This is a strange and rather moving portrait of the learned clinician seated by the bedside of the dying patient concentrating on the immortality of the body and soul, immersed in sorrow and pity. Surely not even the Hippocratic Oath calls for such heroic, professional dedication. Here some will be reminded of an electron jumping to an entirely new orbit of thinking. Others will catch a poignant echo of the biblical, "Lord, I believe; help Thou mine unbelief."

Let us read carefully the following from Freud's *Beyond the Pleasure Principle*. "Our standpoint was a dualistic one from the beginning and is so today more sharply than before, since we no longer call the contrasting tendencies egoistic and sexual instincts, but life-instincts and death-instincts." If we substitute "good" for "life-instincts" and "bad" for "death-instincts" we perceive at once the ancient empires of Light and Darkness. Like many before him, Freud, the atheist, mechanist, and determinist, perceived the Life and Death instincts everlastingly and inextricably interlocked in a ghastly *pas de deux*. Nor should we wonder that Freud was deeply stirred and riveted by this archetypal vision. For here one is dealing with unconscious Manichaeism. This is a theme which is recurrent and transcultural, a theme which at times has fascinated the seer since the dawn of history. If Freud had had a combined Jungian and Daseinsanalysis most likely *Beyond the Pleasure Principle* would never have been written. But then Dr. Eissler's book most likely would never have been written. And that would have been a great pity.

One should by all means purchase this stimulating book. If not as solid science, at least as a species of poetry to be placed on the same shelf with Beddoes, Blair, Young, and some of the English Metaphysicals. As the mood moves him, one will want to dip into it for large helpings of existential *Angst*. In the same mood, one will enjoy the thanatological side-journeys, the graveyard musings, the oddities.

HIRAM K. JOHNSON, M. D.,
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LAW AND THE PRACTICE OF MEDICINE. By *Kenneth George Gray, M. D., B. Sc., Q. C.* (Toronto: The Ryerson Press, 1955. Price: $3.25)

This is the revised and enlarged edition of a book first published in 1947. The 68 pages of the first edition have now grown to 133. Five new chapters have been added and others have been expanded by the inclusion of data not previously available.

One new chapter deals with the production and inspection of medical and hospital records in cases of action before a court.

Another chapter discusses certain special procedures and their legal implications, including tests for alcohol; blood tests for paternity; the use of "lie detectors" (it is satisfactory to note that—"the results of the test have not been admitted as evidence in a trial"); narcoanalysis (it is the author's opinion that information obtained under narcoanalysis, if offered in evidence in a court action, would be rejected); the electroencephalogram (as used, for example, as evidence of brain injury); and artificial insemination (the canny author refers the reader to other cited writers for discussion of the curious legal questions that may arise).

Other new chapters take up the questions of mental illness in criminal cases, amnesia as a defense, sexual offenders, and public health administration.

Insanity as a defense in criminal cases has been the subject of much discussion in both the United States and Canada, especially in recent years. The favorite topic has been an attack on the M'Naghten rules as a criticism of irresponsibility. (The M'Naghten rules date from 1843, not 1853 as the present text, through a typographical slip, misstates.) Critics propose replacing these rules by such tests as embodied in the New Hampshire law (State v. Pike, 1870), or the more recent decision in the District of Columbia case (Durham v. United States, 1954). The fly in the ointment in both these decisions is the necessity of defining "mental disease" and drawing the fine line between mental disease and mental health, which can open the door to endless controversy.

The Criminal Code of Canada, which rules in all the provinces of the Dominion, "preserves the law known as the M'Naghten rules."

In the section on amnesia Dr. Gray discusses briefly, with illustrative examples, the more common causes—alcohol, hysteria, epilepsy, trauma, etc., points to the necessity of distinguishing amnesia from malingering, and discreetly avoids laying down rules for this distinction beyond the guidance of "clinical judgment and experience."

An important feature of the chapter on sex offenders is the section dealing with the "criminal sexual psychopath." The Criminal Code sets forth the specific acts under this head, the rule for obtaining evidence of at least two psychiatrists, and, on conviction, the mandatory sentence of not less than two years in a penitentiary with additional preventive detention. Each such case is subject to review at least once in every three years.

Dr. Gray, who is qualified in both the medical and legal professions, is lecturer in medical jurisprudence and forensic psychiatry at the University of Toronto. His book is an excellent epitome of medico-legal issues, particularly as they arise in Canada. It is a useful reference book for both doctors and lawyers.

C. B. F.

KLINISCHE PSYCHOPATHOLOGIE. By *Kurt Schneider*. (Stuttgart: Georg Thieme, 1955. Price: $3.05.)

This book of Professor Kurt Schneider's is an important contribution to psychiatric literature. It is a carefully written text in clinical psychiatry with psychological and philosophical background in

which the author's clear thinking comes to full valuation. The book comprises a number of papers, some of which have previously been published. One chapter sets forth the author"s conception of mental illness, and the methods of its study. Another section details the various types of psychopathic personality. There is a short chapter on mental defectives and the psychoses to which they are subject. Another deals with abnormal mental states associated with somatic illness.

The author gives minute attention to the individual psychological disturbances, entering into the psychiatric diagnoses and analyses at some length: disturbances of perception, thinking, feeling, volition and emotional states of consciousness and intelligence. The book closes with a chapter on the psychopathology of the emotions and instincts.

It is a pleasure to read this clear and concise text in which no superfluous words are used. It is written from a non-psychoanalytic point of view and represents the psychopathological framework that Professor Schneider has developed over the years.

WILLIAM MAYER, M. D.,
New York City.

EMOTIONAL PROBLEMS OF LIVING. By *O. Spurgeon English and G. H. J. Pearson.* (Philadelphia: W. W. Norton & Co., 1955. $5.95.)

In spite of innumerable popularized articles and paper backs on psychiatry the desired goal of a psychiatrically well-informed lay public remains to be reached. The present volume, authoritative, "unpopularized" but lucid in the presentation of material, directs its appeal to those working in the field of interpersonal relations. Inasmuch as the intelligent layman is aware of his responsibility in his own interpersonal relationships—within the family, on the job, socially—he, too, will find this book informative and provocative.

Although much has been transcribed *en masse* from the earlier edition, there is evidence of fine-tooth-combing throughout in the many insertions and expansions which bring the material forward 10 years. All of the material is authoritative and pertinent, for the most part derived from clinical experience or from first-hand corroboration of dynamic theory. The new edition is some 30% larger and, with the revamping, includes a good deal more on mental disorders and treatment. Antabuse in the program for alcoholics is discussed and a subsection on addictions is introduced. While analysis is the forte of the authors, psychotherapy is presented fairly as having practical value in both case and group work. Mention is made of the role of the general hospital psychiatric section—an increasingly popular arrangement which brings psychiatry closer to the main body of medicine and minimizes the still present stigma of the mental hospital.

Curiously, in a well-presented subsection dealing with Emotional Disturbances that Accompany Organic Illness, there is no mention of the ego's investment in the soma and how the deprivation of mobility, independence, a function, or a part, dictates a new integration—or fragmentation! Too, it should be noted that no mention is made of the ever-growing group of ataractic drugs which are bringing about such decided changes in patients and statistics.

There is an entirely new inclusion on mental health and community facilities. In the realm of counseling, the teacher, the religious leader, and the supervisor, are shown to possess tremendous potential for fostering and maintaining mental health, and preventing mental illness. The ancillary roles of the clinical psychologist and the psychiatric social worker are defined. The final pages are devoted to Self-development wherein the reader is reminded of his ability to help himself. There are some practical suggestions here which might well be read prior to starting the book.

In toto, this book is a well-written presentation of the development of emotional and behavior patterns, normal and abnormal. Practical suggestions are abundant and illustrate the handling of situations and reactions which are part of our everyday experience. It should well serve the needs of the audience to whom it is directed, and it will provide the layman with a meaningful orientation to the more commonly seen emotional problems.

A. L. PETERSON, M. D.,
Pennsylvania Hospital.

TRATADO DE LAS PASIONES. By *Enrique Mouchet.* (Buenos Aires: Editorial Nova, 1953.)

The lengthy bibliography of the author is very rich and varied and extends from 1909 to 1953, touching on all the major problems of theoretical and applied psychiatry.

The author promises in his introduction to unravel the hidden mysteries of passion in all its grandeur and brutality, animating love and hate, self-sacrifice and vengeance.

In his treatment of this problem, the author reveals his vast erudition in the appropriate literature in many languages, well chosen and well interpreted.

He discusses the primary principles of "vital" psychology, and the mechanism of emotion, quoting the intellectualists' theories of Herbart and Nahlowsky, the founder of the physiological theory—Descartes, his later representatives: Lange, James, Sergi and Dumas and their opponents, headed by Sherrington. Leibnitz believed that the disagreements among people stem from their failure to agree on the meaning of words. The author emphatically denies it: human disharmonies are rooted in their temperamental and instinctual differences, in the quality of their individual passionate approach. Without passion everything would die in the obscurity of routine and monotony. Kant distinguished between emotion and passion, comparing the former to water that rises in the dike, and the latter to a torrent that excavates progressively the river bed. Kant saw an antagonism between these two, but the author finds all the states of the soul synergistic. In fact instinct and reason are really one entity. The instinct is the nucleus of the "psychic cell" and when it disappears, the rational activities and most complicated voluntary performances disappear with it. Without passion nothing of importance in the life of the individual or society would occur.

In the chapter on the "Crime of Passion" the legal implications and defenses are amply presented. Love is viewed from its manifold aspects: cultural, sexual, neurotic.

It is an unusual book, well written and thought provoking. It is a worthy contribution not only to psychiatry but also to philosophy, semantics and general literature.

HIRSCH L. GORDON, M. D.,
New York City.

SEX AND CHARACTER. By *Otto Weininger.* (New York: G. P. Putnam's Sons, 1955. $5.00.)

Weininger's *Geschlecht und Charakter* was first published in 1903. It passed through many German editions (within 5 years it had reached its tenth edition). It was translated into English in 1906. The present reissue is a translation from the fifth German edition.

Otto Weininger was 23 years old when his book appeared on the streets of Vienna. A few months later he was dead from a self-inflicted gun-shot wound. That same year August Strindberg had written to Weininger: "To be able, at last, to see the solution of the problem of women is a great relief to me Therefore please accept my reverence and my thanks." For at least a year before his death Weininger had suffered from severe, somewhat intermittent depression with recurring insistent suicidal ideas.

As is well remembered *Geschlecht und Charakter* was a mild, but not the overwhelming sensation the author expected. It was hotly discussed and violently attacked (especially by Möbius), rarely admired, at least so far as published reviews are concerned. It proclaims a low estimate of woman and produces arguments to support his antisemitism. The book may be regarded as a literary curiosity, more interesting for what it reveals of the author's mind than as a positive contribution to psychology.

Those who would be content with an abstract of this 350-page English translation will find it in a 20-page chapter in Abrahamsen's biography of Weininger, *The Mind and Death of a Genius* (Columbia University Press, New York, 1946). But a psychologic or psychiatric library will hardly be complete without the full text of Weininger's masterpiece, the product of a brilliant, if errant mind.

On his gravestone Otto Weininger's father caused this inscription to be placed:

"This stone marks the resting place of a young man whose spirit found no peace in this world. When he had delivered the message of his soul, he could no longer remain among the living. He betook himself to the place of death of one of the greatest of all men [Beethoven], the *Schwarzspanierhaus* in Vienna, and there destroyed his mortal body."

C. B. F.

THE YEARBOOK OF MODERN NURSING, 1956. Edited by *M. Cordelia Cowan.* (New York: G. P. Putnam's Sons, 1956.)

Since it is manifestly impossible for anyone to keep up with the mountain of literature being published today, various groups have turned to the yearbook as a device for bringing together a selected sampling of what is being published, so that the interested reader can get a brief but comprehensive view of the field, and can pursue further those items which interest him the most. This is the first nursing yearbook and certainly compares favorably with those in other fields.

The book is organized into 22 principal sections some with numerous subsections and typically follows the pattern of a summary review of current progress in the given field, followed by brief digests of pertinent articles and a bibliography of significant books. Since it is the first of what is proposed to be an annual yearbook, the articles are not restricted to those published in 1955 but go back in some instances to important things published in previous years. A total of 169 contributors are represented. These include nurses from all aspects of the profession, teachers, anthropologists, sociologists, physicians from various specialties, statisticians, economists, and others.

There has been a general impression that professional nurses are not interested in psychiatric hospital nursing. This has some modicum of truth. Nurses, as well as physicians, psychologists, occupational therapists, social workers, etc., are in short supply and are able to be somewhat choosey as to working conditions, salary, and opportunity for professional advancement. Nevertheless this yearbook indicates clearly, if there was any doubt before, that nurses are tremendously interested in psychiatry and its related fields. Under the 22 main headings are 8 items relating specifically to the field. They include such things as Psychiatric Nursing by Hildegarde Peplau, Mental Health Nursing by Cynthia Warren, Human Relations by Florence M. Harvey and Eleanor Lewis, Behavioral Dynamics by Theresa G. Muller, Human Relations by Norma G. Johnson, and Education in Psychiatric Nursing by Theresa I. Lynch. Besides these there are numerous references in more general articles which show an intense awareness of the importance of behavioral factors in the art and science of nursing.

The book has a foreword by Miss Mary M. Roberts, Editor Emeritus of the *American Journal of Nursing,* and the first article is a fascinating and touching essay on the art of nursing written by Mrs. Lucille Petry Leone, which was read at a dedication ceremony in Minneapolis. It describes the modern concept of the patient as a person in a most excellent manner.

If there is any fault in this book it is its size and rather encyclopedic nature. Perhaps the future issues will be less formidable in this respect. However, it thoroughly deserves the attention of all persons in psychiatry who are concerned in any way with nursing.

GRANVILLE L. JONES, M. D.,
Chairman, Committee on
Psychiatric Nursing,
The American Psychiatric
Association.

Chlorpromazine and Mental Health. Smith, Kline & French Symposium. (Philadelphia: Lea & Febiger, 1955. $3.00.)

Chlorpromazine and Mental Health reports verbatim the proceedings of a conference organized to evaluate 3 years of diversified experience with chlorpromazine in psychiatry. At this conference, held in Philadelphia on June 6, 1955, 117 psychiatrists from the United States, Canada, and France gathered to report and compare their findings with this drug. Specifically discussed are (1) how chlorpromazine affects chronic and acute psychoses, (2) how chlorpromazine affects psychoneuroses, (3) the measures which keep the discharged patient from returning to an institution, and (4) the immediate and long-range effects of chlorpromazine on the mental hospital.

In general there was agreement that chlorpromazine definitely led to improvement in a large percentage of both psychotic and neurotic patients; that in the opinion of some of the investigators it was as effective as electroshock and insulin shock and "makes psychotherapy far more effective." In addition to improvement in individual patients, most investigators reported valuable changes in ward conditions brought about by chlorpromazine. As Dr. Charles D. Yohe said, "We have gotten all of our patients out of seclusion cells and wearing clothing and our attendants are no longer complaining of torn shirts and bruises inflicted by combative patients." And, as Dr. C. G. Stillinger said, "Restraints are pretty much a thing of the past with us, and are gathering dust in the hospital's supply closets."

No general agreements were reached, however, in discussions of dosage: anywhere from 25 up to 4,800 mg. per day was reported as the effective dose. However, most investigators felt that this variation was primarily due to individual variation in response.

In the matter of maintenance therapy, wide differences of opinion existed, and the question arose, "Should you or should you not discontinue the drug after the patient improves?" Some speakers felt that if chlorpromazine is withdrawn after only short treatment, relapse of the patient is almost inevitable; but if the patient has been treated for a year or two, the chances for continued remission are better. Dr. N. William Winkelman, Jr., put this opinion as follows: "When the drug is administered to a patient, radical psychodynamic changes take place over a long period of time. . . . If chlorpromazine is given over a long, long period of time in adequate dosage, the personality can undergo psychologic changes merely on the basis of successful living."

Side-effects, it was generally agreed, reflect more an individual intolerance to chlorpromazine rather than a universal toxicity. Of interest were many reported cases of subclinical jaundice, without liver damage. This oftentimes cleared up despite the continuance of chlorpromazine. Skin reactions and rare agranulocytosis were also mentioned.

The discussion raised but did not answer questions concerning the connection between body chemistry and mental illness. For instance, chlorpromazine in the experience of some investigators seems to depress endocrine function; how, then, are hormones related to mental illness? Parkinsonism develops in some of the patients showing the most improvement; what, possibly, is the relationship between basal ganglion symptoms and chlorpromazine and mental health?

There were "scientific speculations" about the future treatment of mental illness with chlorpromazine and yet-to-come drugs. There were a few skeptics who denied the drug had any value in treating mental illness and one sanguine optimist envisioned the abolishment of institutions, a complete change in the attitude of society toward mental illness, and a revolution in psychiatric treatment.

The book, being largely a record of oral discussion, is easy reading. Sometimes, as discussions often go, certain questions are asked but never answered—frustrating the conscientious reader. Too, the line of thought sometimes wanders, much as a child in a toy store exploring new sources of stimulation.

Although the papers presented offer very little that is new either experimentally or theoretically they do conveniently summarize within one volume the present state of our knowledge (and ignorance).

Nathan S. Kline, M. D.,
Rockland State Hospital.

Present Day Psychology. Edited by *A. A. Roback*. (New York: Philosophical Library Inc., 1955. $12.00.)

Forty original contributions comprise this massive volume purporting to provide the reader with an over-view of the various fields or branches of psychology plus several areas referred to as "psychological borderlands and humanities."

This work represents the collaboration of "forty experts in the various fields" and is divided into five parts. Each chapter is prefaced by an editor's note about the author and a general statement about the topic. Footnotes and selected references are appended to most chapters.

Part I covers such "topical departments" as neurology, sensory processes, perception, cognition, attention, memory, emotion, personality and character.

Part II treats present day aspects of various "branches" of psychology. Included are child psychology, adolescence, educational psychology, comparative psychology, abnormal, social, applied and military psychology. In this part there is also a chapter on experimental parapsychology, contemporary histories and psychometry.

Part III is devoted to dynamics and clinical psychology covering psychodiagnostics, projective techniques, psychoanalysis, psychosomatics, clinical psychology, psychotherapy, psychodrama, abnormal child psychology, individual psychology, interpersonalism and someikonics, speech and hypnotherapy.

Part IV deals with methods and Part V with "Psychological Borderlands and Humanistics" (Glossodynamics and psycholinguistics).

The scope of this volume is wide but in many places it lacks depth. Some of the contributors have hoed the same row many times previously and

have failed to consider recent research findings in their survey of the topic. Others, however, present a comprehensive review of present-day research and thinking on their subjects. Repetition has been kept to a minimum and continuity has been assured by an excellent editing job.

The need for such a volume is dubious since the Annual Review of Psychology, albeit more limited in scope, serves to keep its readers up to date on recent developments. The volume can serve a useful purpose for the graduate student who is preparing for his "prelims," but it is of doubtful value to the clinician or experimentalist because of its lack of depth. The purpose of the book has been only partially fulfilled in its promise to provide the reader with an overview of the present-day status of thinking in the many branches of psychology.

James J. Dixon, Ph. D.,
Philadelphia, Pa.

A New Approach to Schizophrenia. By *Julius I. Steinfeld, M.D.* (New York: Merlin Press, Inc., 1956. $4.95.)

The biologic aspects of psychiatry are being studied today as never before. At one extreme are those who think of "functional" psychoses (such as schizophrenia) in terms of physical or somatic diseases. At the other extreme are those who believe that the schizophrenic is a perfect organ simply being played out of tune by a poor musician. And in the middle are those who seek for an organic substratum and a psychological superstructure. The late Dr. Steinfeld belongs in this group. He believes that schizophrenia is due to an alimentary syndrome which began in the first week of life. This unsatisfied hunger caused a trauma, partly physical, partly emotional. The person then devotes his life to seeking oral satisfactions, and schizophrenia is a quest for such satisfactions. If the parents tried to replace oral fulfillment by such diversions as rocking or cooing, the baby feels cheated, develops suspicion and then becomes "paranoid." If hunger develops to the point where there is fear of depleting physical reserve, the person learns to remain almost motionless to protect those reserves. This is catatonia. In this light, the Oedipus complex has a biologic foundation.

The key, as Dr. Steinfeld sees it, is acidosis. In children the symptoms of acidosis include shyness, fatigue, unwillingness to eat—or perverted appetite —restlessness and poor sucking. The similarity to schizophrenia is apparent, and the role of insulin both in acidosis control and schizophrenia control is suggestive. So, too, the mother factor in the delusions of the schizophrenic. So, too, good results have been reported by therapists (whether psychiatrists, nurses, attendants or totally untrained people) who have an urge to help, to feed, to care for, to nourish and to support.

Dr. Steinfeld has administered inhalations of acetone to produce a controllable acidosis and says that "many patients so treated have shown dramatic changes." He urges that babies be given full oral gratifications as the best preventive of schizophrenia. In many societies with low schizophrenia rates, there is high "oral indulgence." In American middle-class society, with its high schizophrenia rate there is, he fears, too short a period of nursing, too much reluctance to nurse *via* the breast, too much rigidity in feeding schedules, and, in general, a "low oral indulgence." Where in more primitive parts of the world, the female breast is a nutritional and maternal symbol, in western cultures it has become a sexual symbol.

Dr. Steinfeld's untimely death in the summer of 1956 has deprived our profession of a provocative thinker. While many of us will believe that this alimentary theory of schizophrenia is oversimplified, we are in debt to Dr. Steinfeld for his calling attention to this challenging possibility. About half the book is made up of case reports. While there is no index, the author did provide a working lexicon of technical terms used in the book, so that the sophisticated non-psychiatrist should be able to follow this intriguing thesis.

Henry A. Davidson, M. D.,
Cedar Grove, New Jersey.

Evaluation in Mental Health: A Review of the Problem of Evaluating Mental Health Activities. A Report of the Subcommittee on Evaluation of Mental Health Activities, Community Services Committee, National Advisory Mental Health Council. (Publication No. 413, U. S. Dept. of Health, Education, and Welfare, Public Health Service, National Institute of Mental Health, 1955.)

The Subcommittee is composed of top men in the fields of psychiatry, education, and applied social sciences in community health and welfare settings, assisted by a liaison staff member, Community Services Branch, National Institute of Mental Health. The foreword is by Dr. R. H. Felix, Director, National Institute of Mental Health.

This book represents a milestone in evaluating the literature in these various fields that, in the minds of this Subcommittee and consultants, seems to have special significance in the etiology, diagnosis, treatment and prognosis in the broad field of mental illness and the factors influencing individual and community mental health. The book covers a wide range of topics. There are 984 references with abstracts varying in length from a sentence stating, for instance, "Unpublished Research in Progress" to half a page. This in itself would be an excellent contribution in the theoretical and methodological considerations in mental health activity areas listed as follows: Community Organizations, Administration, Professional Personnel, Education and Information, Preventive Effects of Programs, Factors Influencing Individual Mental Health, and Diagnostic, Prognostic and Treatment Procedures.

In addition to these abstracts there are some 60 pages of important comment on each of these areas listed in the beginning of the book.

It is a valuable reference book grouping as it does pertinent references under these headings. The 984 references represent the cream of thoughtful articles in this general field over the last several years.

The members of this Subcommittee on Community Services deserve a vote of thanks for a job well done. Such evaluations help greatly to keep our feet on the ground.

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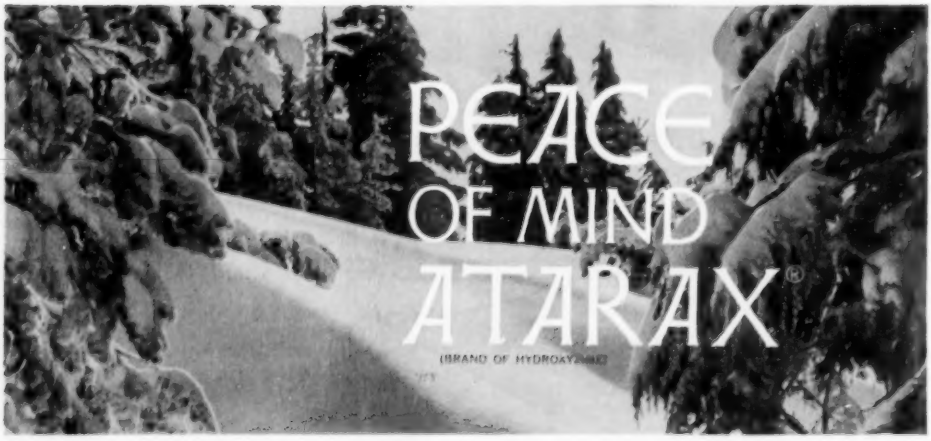

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